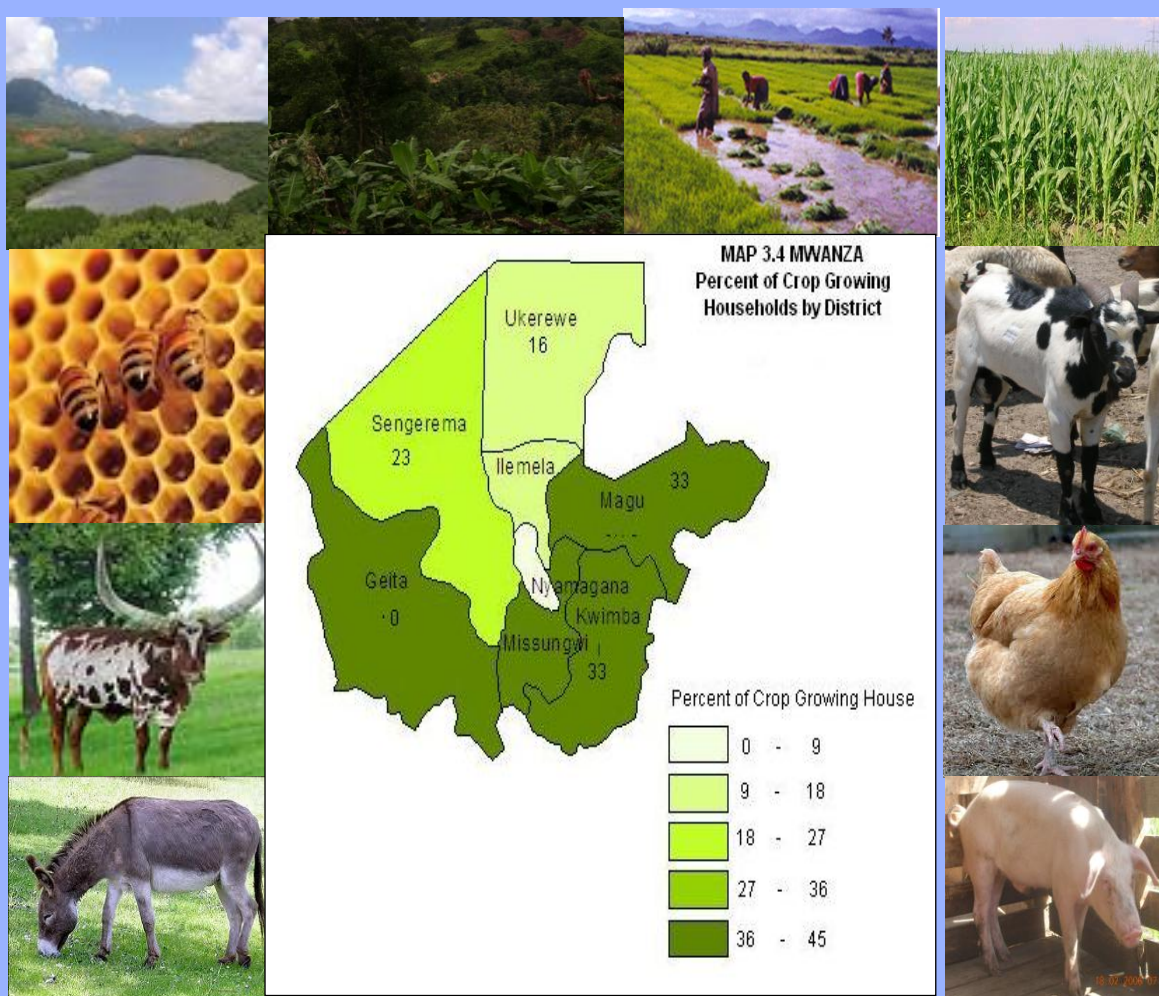




The United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE 2007/2008

Volume Vs: REGIONAL REPORT: –**MWANZA REGION**



Ministry of Agriculture, Food Security and Cooperatives, Ministry of Livestock Development and Fisheries, Ministry of Water and Irrigation, Ministry of Agriculture, Livestock and Environment, Zanzibar, Prime Minister's Office, Regional Administration and Local Governments, Ministry of Industries, Trade and Marketing, The National Bureau of Statistics and the Office of the Chief Government Statistician, Zanzibar

JULY, 2012



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ACRONYMS

ASDP	Agricultural Sector Development Project
CSPro	Census and Survey Processing Program
DFID	Department For International Development
DIAS	District Integrated Agricultural Survey
DS	District Supervisor
EAS	Expanded Agricultural Survey
EAs	Enumeration Areas
EU	European Union
FE	Field Enumerator
GDP	Gross Domestic Product
Ha	Hectares
IAS	Integrated Agricultural Survey
ICR	Intelligent Character Recognition
IEC	Information, Education and Communication
JICA	Japanese International Cooperation Agency
LRS	Wet Season
MAFS	Ministry of Agriculture and Food Security
MCM	Ministry of Co-operatives and Marketing
MWLD	Ministry of Water and Livestock Development
NBS	National Bureau of Statistics
NGO	Non Governmental Organization
NMS	National Master Sample
NSCA	National Sample Census of Agriculture
NSGRP	National Strategy for Growth and Reduction of Poverty
PORALG	President's Office, Regional Administration and Local Government
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
RAAS	Rapid Appraisal Agricultural Survey
RS	Regional Supervisor
RSM	Regional Statistical Manager
SAC	Scotts Agriculture Consultancy Ltd
SPSS	Statistical Package for Social Science

SRS	Dry Season
TOT	Training of Trainers
ULG	Ultek Laurence Gould
UNDP	United Nations Development Programme
UNFAO	United Nations Food and Agriculture Organization
VPO	Vice President Office

PREFACE

At the end of the 2002/03 Agriculture Year, the National Bureau of Statistics, Tanzania Mainland and the Office of the Chief Government Statistician, Tanzania Zanzibar in collaboration with the Ministries of Agriculture and Food Security; Water and Livestock Development; Cooperatives and Marketing as well as the President's Office, Regional Administration and Local Government (PORALG) conducted the Agriculture Sample Census. This is the third Agriculture Census to be carried out in Tanzania, the first one was conducted in 1971/72, the second in 1993/94 and 1994/95 (data on household characteristics and livestock count were collected in 1993/1994 while data on crop area and production were collected in 1994/95).

It is considered that this census is one of the largest to be carried out in Africa and indeed in many other countries of the world. The census collected detailed data on crop production, crop marketing, crop storage, livestock production, fish farming, tree farming, access to infrastructures and services and poverty indicators.

In addition to this, the census was large in its coverage as it provides data that can be disaggregated at district level and thus allow comparisons with the 1998/99 District Integrated Agricultural Survey. The census covered smallholders in rural areas only and large scale farms.

This report presents data disaggregated to district level for Mwanza region. Due to numerous variables collected, the analysis is based on the most important smallholder variables. More variables can be found in the table of results annex.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information to assist in the proper planning of this sector and in the administrative decentralization of planning to district level. It is hoped that this report will provide new insights for planners, policy makers, researchers and others involved in the agricultural sector in order to improve the prevailing conditions faced by crop producers and livestock keepers in the country.

On behalf of the Government of Tanzania, I wish to express my appreciation for the financial support provided by the development partners, in particular, the European Union as well as DFID, UNDP, Japanese Government, JICA and others who contributed through the pool fund mechanism.

Special thanks should go to all those who in one-way or the other contributed to the success of the survey. In particular, I would like to mention the enormous effort made by the Planning Group composed of professionals from the Agriculture Statistics Department of the National Bureau of Statistics (NBS), the Office of the Chief Government Statistician, Zanzibar (OCGS) and the Statistics Unit of the Ministry of Agriculture and Food Security (MAFS) with technical assistance provided by Ultek Lawrence Gould (ULG), Scotts Agriculture Consultancy Ltd and the Food and Agriculture Organisation of the United Nations (FAO).

Finally, let me extend my sincere gratitude to all professional staff of the National Bureau of Statistics and Office of the Chief Government Statistician, the sector Ministries of Agriculture and PORALG, the Consultants as well as Regional and District Supervisors and field enumerators for their commendable work. I am also indebted to the respondents, particularly the heads of households, for spending much of their valuable time in providing data and all necessary information during enumeration. Certainly without their dedication, the census would not have been successful.

Dr. Albina A. Chuwa
Director General,
National Bureau of Statistics

EXECUTIVE SUMMARY

The executive summary highlights the main survey results obtained during the National Sample Census of Agriculture 2007/08. This report covers small-scale agricultural households in rural areas of Mwanza region. Specifically, it covers, among others, important findings in relation to agricultural production, husbandry practices, and crop productivity.

Household Characteristics

The number of agricultural households in Mwanza region was 398,993. Geita had the largest number of agricultural households (133,776) followed by Sengerema (81,979), Magu (64,220), Kwimba (51,796), Missungwi (38,009), Ukerewe (37,302), and Ilemela had the smallest number of households (13,524). Majority of households were involved in crop production (221,907, 55.62%) followed by crops and livestock (175,874, 44.08 %), livestock only (961, 0.24%), and pastoralists only (251, 0.06%). Geita had the largest number of crop growing households (65,635) while Ilemela had the smallest number of crop growing households.

Mwanza region had a total of rural agricultural population of 2,695,703 of whom 1,364,779 (51%) were males and 1,330,924 (49%) were females. However, the distribution of household members by age and sex shows that male members outnumbered their female counterparts in the following age groups: less than 4 to 15-19 years; 40-44 to Above 85 years. On the other hand, female members outnumbered their male counterparts in the following age groups: 25-29 to 35-39 years.

The level of literacy of household members in Mwanza was 71.6 (1,609,744) and those who could not read and write accounted for only 38.4% (638,985) of household members. Magu recorded the highest literacy level (78.8%) while Geita recorded the lowest literacy level (66.2%).

The literacy rate for the heads of households in the region was 59 percent. The literacy rate for the male heads of household was 53% (852,935) and that of female heads was 47% (756,810). Also, the literacy rate of male heads was higher than that of female heads in all districts. The district with the highest literacy rate amongst male heads of households was Ilemela (55%) while the lowest literacy rate was recorded in Ukerewe and Missungwi (52%). On the part of female heads of household the highest rate was recorded in Ukerewe and Missungwi (48%) while Ilemela had the lowest rate (45%).

Land Area

The total area of land available to smallholders was 995,890 ha while the average usable area per household was 0.99 ha. On average about 89% (88.86%) of the total usable land was utilized and only 11% was not used.

Except for Ukerewe, which had 0.97 ha of usable area per household, all the other districts had 0.99 ha usable area per household. Furthermore, Kwimba had the largest planted area per household (0.91 ha) while Ukerewe had the smallest planted area per household (0.68 ha). On the other hand, Kwimba had the highest percent of land utilization (91.74%) while Ukerewe had the lowest percent (70.44%).

Planted Area

The area planted with annual crops and vegetables was 579,479 ha out of which 408,767 ha (71%) were planted during the short rainy season while only 170,712 ha (29%) were planted during the long rainy season (wet season).

Maize

Maize is the major cereal crop in Mwanza region. There were 368,417 households engaged in maize production with Geita having the largest number of households (111,885) accounting for 30% and the smallest number of households engaged in maize production was recorded in Ilemela (13,206). The total area planted with maize was 263,281 ha. The largest area planted with maize was recorded in Geita (94,392 ha) while Ukerewe had the smallest area (3,830 ha). Furthermore, the highest yield of maize was obtained in Sengerema (1.34 ton/ha) and Missungwi recorded the lowest yield (0.74 ton/ha).

Paddy

A total of 173,421 households were engaged in paddy production. The total cultivated area was 124,417 ha. Geita had the largest area planted with paddy (41,328 ha) accounting for about 24% (23.8 %) of the total area planted with paddy in the region. In contrast, Ilemela had only 1,723 ha representing about only 1% (1.38%) of the total area grown to the crop. The average area planted with paddy per household was 0.72ha. Geita had the largest planted area per paddy growing households (0.96 ha) followed by Missungwi (0.80 ha), Kwimba (0.73 ha), Sengerema (0.64 ha), Magu (0.55 ha), Ilemela (0.39 ha) while Ukerewe had the smallest area per household (0.31 ha).

Sorghum

Based on area planted sorghum was the third most important cereal crop in the region. The number of households that grew sorghum in Mwanza region during the wet season was 173,421. Geita recorded the largest planted area with sorghum (41,328 ha) followed by Kwimba (225,390 ha), Sengerema (23,131 ha), and Missungwi (15,384 ha). Other districts each had less than 3,000 ha planted with sorghum with Ilemela having the smallest area (1,723 ha).

Root and Tuber Crops Production

The most important root and tuber crops grown in Mwanza region were cassava, sweet potatoes, yams and Irish potatoes with a combined planted area of 114,497 ha. Geita had the largest area planted with cassava (35,911ha) while Kwimba had the smallest area (3,216ha). Regarding yield, Ukerewe and Magu had the highest yield (2tons/ha) and Geita recorded the lowest (1.1tons/ha).

Pulse Crops Production

The total area planted with pulses was 72,313 ha, of which the largest area was planted with chick peas (26,552 ha) followed by beans (31,238 ha), green gram (9,061 ha), cow peas (4,540 ha), Bambara nuts (837 ha), and the smallest area was planted with mung beans (85 ha).

The total production of pulses was 43,938 tons of which the harvest of beans (17,367 tons) and chick peas (11,496 tons) represented about 66% (65.7%) of total production of pulses. Mung beans recorded the highest yield (1.24 ton/ha) while the lowest yield was obtained from chick peas (0/52 ton/ha).

Oil Seed Production

The total number of households involved in oil seed production was 58,209. Most of these households planted groundnuts (55,848). These households cultivated a total of 21,972.4 ha of which the largest area was planted with groundnuts (20,701.4ha) followed by sunflower (820 ha), simsim (219 ha), soya beans (155 ha) while the smallest area was planted with castor fungi (77 ha). Geita had the largest area planted with groundnuts 9378 ha (45.6%) while Ukerewe had the smallest planted area 9ha (0.04%).

Fruit and Vegetables

Various vegetables and fruits were produced, largely for the market and not household consumption. A total of 13,066 households were involved in production of different types of vegetables. The largest number of households planted tomatoes (4,635) followed by okra (1,355), onion (1,191), cabbage (1,054), amaranths (1,028), and cabbage (1,906). Other vegetable crops were each grown by a relatively small number of households.

Geita had the highest percent of fruit and vegetable planted area (44.2%) followed by Sengerema (17.02%), Magu (16.9%), Missungwi (11.8%), Ukerewe (1.2%), and Kwimba had the lowest percent (0.5%). On the other hand the largest planted area per fruit and vegetable growing households was recorded in Ilemela (1.1 ha) followed by Missungwi (0.3 ha), Magu (0.2 ha), Sengerema (0.2ha), Geita and Missungwi (0.2 ha).

Permanent Crops

The total planted area with permanent crops was 120,585 ha of which the largest area was planted with other crops (107,942 ha) followed by mangoes (5,890 ha), banana (3,629 ha), oranges (2,037 ha), and sugar cane (989 ha) while the smallest area was grown to coconut (6 ha). Geita recorded the highest percent of total planted area with perennial crops (34.31%) followed by Sengerema (24.23%), and Ukerewe (17.21%) while Kwimba had the lowest percent (2.65%). On the other hand, Magu recorded the largest planted area per household (0.78ha) while Ilemela had the smallest planted area (0.50 ha).

Use of Improved Seeds

In all districts, the area planted with improved seeds was smaller compared to the area planted without improved seeds. Also, only 18,231 ha (3%) were planted with improved seeds while 647,639 ha were planted without using improved seeds. Furthermore, out of the 18,231 ha planted area with improved seeds, the highest percent was recorded in Ilemela (10%) while Ukerewe and Kwimba had the lowest percent (1%).

Fertilizer Use

A total of 43,681 ha were planted with organic fertilizer while the area planted with inorganic fertilizer was 12,086 ha (Chart 3.60). The area planted with organic fertilizer was much bigger in Vuli (35,894 ha) than in Masika (7,786 ha). Similarly, the area planted with inorganic fertilizer was

much bigger in Vuli (4,300 ha) than in Masika (895 ha). Of all districts, Geita had the largest area planted with organic fertilizer in Vuli (10,346 ha) while in Masika the largest area was recorded in Missungwi (2,422 ha).

Irrigation

In Mwanza region, the area of annual crops under irrigation was 18,231 ha with almost a third of the area under irrigation found in Geita (6,135 ha) while the smallest area was recorded in Ukerewe (158 ha).

Crop Storage

Crop storage means keeping a crop for a certain period of time for various reasons including food for the household, in order to sell at higher prices or as seed for planting in the following season. Kwimba had the highest percent of households storing crops (98%) followed by Geita (97%), Ilemela (96%), Sengerema (95%), Magu (94%) and Missungwi and Ukerewe had the same percent of (92%).

Crop Marketing

Geita had the largest number of households that sold crops (101,915). In contrast Ilemela had the smallest number of crop selling households (8,380). Kwimba recorded the highest percent of households selling crops (76.24%) followed by Missungwi (74.47%), Geita (73.60%), Magu (72.71%), Sengerema (67.62%), Ilemela (56.03%) while Ukerewe had the lowest percent (49.90%).

Agricultural Credit Agricultural

Credit was obtained from various sources. The highest percent of households received credit from savings and credit societies (42.4%) followed by family/friend or relatives (40.2%), GO/Development project (4.0) private individuals (3.6%), trader/trade store (7.2%) and cooperatives is less than (2%).

Regarding percentage distribution of households receiving credit by main source of credit and district, family and relatives provided the main source of credit for agricultural households in Sengerema and Geita. On the other hand, cooperatives were important sources of credit in Ukerewe, Magu, and Missungwi. Traders/stores were important source in Geita.

Crop Extension Services

Out of a total of 485,212 crop growing households, 397,781 households representing 51.3% of the total crop growing households received extension advice on crop production while 48.7% (193,665 households) did not. Ilemela had the highest percent of households receiving extension advice (85.8%) followed by Magu (81.3%), Missungwi (56.2%), Sengerema (51.9%), Kwimba (47.7%), Geita (37.3%) while Ukerewe had the lowest percent (28.5%).

Soil Erosion and Water Harvesting Facilities

The number of agricultural households that had soil erosion and water harvesting facilities on their farms in Mwanza region was 34,715 representing 8.7% of agricultural households while those without structures was 364,278 (91.3%). Various types of erosion control and water harvesting structures were used in the region and varied by type and district. Most of these structures were comprised of erosion control bunds (312,560) followed by terraces (162,858), drainage ditches (91,406), tree belts (37,251), water harvesting bunds (17,934), Vetiver grass (9,138), other (7,578), and gabions/sandbag (6,565).

Livestock and Poultry Production

Cattle

The total number of cattle in the region was 1,976,971 distributed in 220,964 households. The largest population of cattle was found in Geita (497,665) followed closely by Magu (485,056), Kwimba (368,201), Sengerema (281,969), Missungwi (250,674), Ukerewe (66,039) while Ilemela had the smallest population (27,367).

Goats

A total of 919,755 goats were kept in 145,307 households giving an average of six goats per goat keeping households. Geita had the largest number of goats (244,817) followed by Magu (183,145), Kwimba (161,327), Missungwi (104,080), Ukerewe (79,118). In contrast, Ilemela had the smallest number (24,874).

Sheep

The total number of sheep in the region was 224,403. Magu had the largest number of sheep (61,683) accounting for 28% of the total population of sheep in the region. Other districts with a

sizable number of sheep were Kwimba (56,528), Sengerema (39,472), Geita (33,787), and Missungwi (30,126) while Ukerewe had the smallest number of sheep (368).

Pigs

The total population of pigs was 17,277. Sengerema had the largest number of pigs (4,453) followed by Geita (3,323), Kwimba (2,558), Ilemela (2,334), Magu (1,903), Missungwi (1,877), and Ukerewe had the smallest number (829).

Chicken

The total number of chicken in the region was 3,329,364. These were distributed in a total of 280,515 households thus giving an average of 12 chickens per chicken rearing households. The District with the largest number of chicken was Geita (970,683) followed by Sengerema (625,068), Magu (591,296), Kwimba (462,457), Missungwi (358,133), Ukerewe (219,208) while Ilemela had the smallest number (102,520).

Poverty Indicators

Types of Toilets

Out of a total 398,993 households 8% did not have toilets while the rest (92%) had one type of toilet or the other. In contrast, Missungwi had the highest percent of households without toilets (14%) and Ilemela had the lowest percent of households without toilets (4%). Most of those who reported owning toilets used traditional pit latrines (344,417, 86%) while those with improved latrines accounted for 5% (20,842) and only 1% (2,905) had flush toilets.

Geita District had the largest number of households without toilets (10,524, 34%) while Ilemela had the lowest (1,167, 3.8%). However, Geita had the largest number of traditional toilets (96,930) closely followed by Sengerema (75,097) while Ilemela had the lowest (10,607). Furthermore, Magu had the largest number of households with improved latrines (7,453) and the smallest number was recorded in Missungwi (845). None of the households in Missungwi reported having flush toilets while the largest number was recorded in Ukerewe (737).

Roofing Material

Geita had the largest number of households (50,127) using leaves or grass for roofing material while the smallest number was recorded in Ilemela (3,447). Similarly, Ilemela had the lowest

percent of households using leaves or grass as roofing material (25%) while Missungwi had the highest percent of households with leaves/grass roofing (60%). Generally, houses in this region are roofed with iron sheets (51%) followed by grass/leaves (44%) and then grass/mud (3%).

Access to Drinking Water

In Mwanza region 225,945 of agricultural households obtained drinking water within a distance of less than one kilometer during the wet season while the figure drops to 169,899 during the dry season. The most common distance to the source of drinking water was between 1-199 km in both wet and dry seasons.

Number of Meals per Day

Majority of households in Mwanza region had two meals a day (275944, 69%) followed by those who had three meals per day (120887, 30%) and those who had only one meal a day accounted for 1%.

Geita had the largest number of households reporting eating three (3) meals per day (31,294) while Ilemela recorded the smallest number (3,394). Furthermore, Geita had the largest number of households that had two meals a day (80,036) while the smallest number was recorded in Ilemela (9,971). Also, Geita had the largest number of households that had one meal a day (831) while Missungwi had the smallest number (94). Nevertheless, Missungwi had the highest percent of households eating 3 meals (51%) while Ukerewe had the lowest percent of households (14%).

Magu recorded the highest percent of households that had not eaten meat (61%) while Kwimba had the lowest percent in this category. The highest percent of households that reported eating meat once was found in Kwimba (42%) while Ilemela recorded the lowest percent (25%). Moreover, Geita recorded the highest percent of households that ate meat more than once (25.56%) and the lowest percent was reported in Ilemela (5.6%).

Kwimba had the highest percent of households that had not eaten fish (32%) while Ukerewe recorded the lowest percent (2%). Also, Missungwi had the highest percent of households reporting eating fish once (32%). Besides, Sengerema recorded the highest percent of households that reported eating fish more than once (26.83%). In contrast, the lowest percent in this category was reported in Ilemela (3.92%).

1. BACKGROUND INFORMATION

1.1 Introduction

This part of the report presents a brief description of the regional profile by providing information on geographical location, land area, climate, administrative set up, population and socio-economic indicators. The information will provide the user with a general understanding of the region and its resources.

1.2 Geographical Location and Boundaries

Mwanza region lies in the northern part of Tanzania located between latitude 10 30' and 30 south of the Equator.

Longitudinally the region is located between 310 450 and 430 10' east of Greenwich, the northern part of the region is surrounded by the waters of Lake Victoria, locally known as Lake Nyanza. That water in turn separates the region from the neighboring countries of Kenya and Uganda. To the west is Kagera region while the South and Southern parts border Shinyanga region, Mara region borders Mwanza in the northeast.

The region is divided into eight districts namely Ukerewe, Magu, Kwimba, Sengerema, Geita, Missungwi, Ilemela and Nyamagana (*not included in the survey*). The region headquarters is located in Nyamagana District.

1.3 Land Area

The region has an area of 35,187 km²: out of this area, 20,095 km² is dry land and 15,092 km² is covered by Lake Victoria.

1.4 Climate

1.4.1 Temperature

The temperature in the region is to some extent influenced by Lake Victoria, about 250 to 280F being generally the average maximum temperature from September to December. The cool dry season from June to August experiences low temperatures which range between 200 – 110F

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1.4.2 Rainfall

The average annual rainfall of Mwanza region is about 930mm varying from 1,800mm in the western parts of Ukerewe Island to 570 mm. Under normal conditions the rainfall is distributed mainly during two periods, namely the short rains in October-December and long-rains from March to May. There is a dry spell from January to March.

1.5 Population

Mwanza region has the largest population of any region in Tanzania. It has a population of 2,929,644 according to the 2002 population census

1.6 Socio - Economic Indicators

The regional Gross Domestic Product (GDP) at current prices for the year 2003 was estimated to be TSh 835,048 million with a per capita income of shillings 277,556 . The region held 6th position among regions on GDP and contributed about percent to the national GDP

The main economic activities carried out by Mwanza region's population are agricultural production, livestock keeping and to significant extent fishing. There is no commercial farming in the region. Subsistence farming is the main form of farming.

Mwanza region possesses great development potential. Besides, the region is connected to the other part of the country by road, rail, water and air networks.

2. INTRODUCTION

This section provides technical and operational description of the National Sample Census of Agriculture (NSCA), carried out in the rural areas of Tanzania Mainland and Tanzania Zanzibar during the 2007/08 agricultural year. It details the background and the rationale for carrying out the NSCA in 2002/03 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

This report (Volume Vn) is among the 21 regional reports for the Mainland. Other Census reports include the Technical Report (Volume I), Crop Sector Report at National level (Volume II), Livestock Report at National level (Volume III), Large Scale Farms Report (Volume IV), Regional Reports (Volume V series), Zanzibar Livestock Report (Volume VI) and Zanzibar Crop Sector Report (Volume VII). Unlike the 2002/03 Agricultural Sample Census, the 2007/08 Sample Census does not have a separate report for Smallholder Household Characteristics and Access to Natural Resources Report. Other thematic reports will be produced depending on the demand and availability of funds.

This report is divided into five main sections; Background Information, Introduction, Census Results, District Profiles and Appendices. The definitions relating to all aspects of this report can be found in the questionnaire.

2.1 The Rationale for Conducting the National Sample Census of Agriculture

The Government of Tanzania has embarked on various plans geared to eradicate poverty by the year 2025 and Tanzania Zanzibar by the year 2020. In order to facilitate intervention and monitoring activities of the Poverty Monitoring Master Plan, the government has planned a series of censuses and surveys to assist in policy formulation, planning and to track changes in the wellbeing of the population of Tanzania. In this Master Plan, a series of Agricultural Censuses have been planned, the first one was undertaken in 2002/03 agricultural year and the second in 2007/08.

Demands for reliable and timely agricultural data have become significantly increasing for monitoring outcomes and progress of the poverty monitoring tools like the Agricultural Sector Development Programme (ASDP) and performance of the respective MDAs (ASLMs).

Following the decentralization of the Government's administration and planning functions, there has been a pressing need for agricultural and rural development data disaggregated at regional and district level. The provision of district level estimates will provide essential baseline information on the state of agriculture that supports decision making by the Local Government Authorities and in the design of District Agricultural Development and Investment Projects (DADIPS). The increase in investment is an essential element in the national strategy for growth and reduction of poverty.

2.2 Census Objectives

The 2007/08 Agricultural Sample Census was designed to meet the data needs of a wide range of users down to the district level including policy makers at local, regional and national levels, rural development agencies, funding institutions, researchers, NGOs, farmers organizations, and the like. The dataset is both extensive in its sample and detailed in its scope and coverage to meet the user demand.

The census was carried out in order to:

- Identify structural changes, in the size of farm household holdings, crop and livestock production, farm inputs and implement use. It also seeks to determine if there are any improvements in the rural infrastructures and the level of agricultural household living conditions.
- Provide benchmark data on productivity, production and agricultural practices in relation to policies and interventions promoted by the Ministry of Agriculture and Food Security and other stakeholders.
- Establish baseline data for the measurement of the impact of high level objectives of the Agricultural Sector Development Programme (ASDP), National Strategy for Growth and Reduction of Poverty and other rural development programmes and projects.

2.2.1 Census Scope and Coverage.

The 2007/08 Agricultural Sample Census was conducted for both large and small scale farms. The data was collected from a sample of 52,635 small scale agricultural households of which 48,880 were from the Mainland and 4,755 from Zanzibar. To meet National estimates, data was also

collected from 1,006 Large Scale Farms (968 on the Mainland and 38 in Zanzibar) on a complete enumeration basis.

Three different questionnaires were used to collect data on agriculture and related aspects. These were:

- Small scale farms questionnaire;
- Community questionnaire; and
- Large scale farm questionnaire.

The small scale farm questionnaire was the main census instrument which included questions related to crop and livestock production and practices; population demographics; access to services; resources and infrastructure; issues on poverty and gender. Main subjects covered during the study include:-

- Household demographics and activities of the household members;
- Land access/ownership/tenure and use;
- Crop and livestock production and productivity;
- Access to inputs and farming implements;
- Access and use of credits;
- Crop marketing, storage;
- Fish farming;
- Investment activities: Irrigation structures, water harvesting, erosion control;
- Off farm income;
- Household living conditions (housing, sanitary facilities, etc);
- Livelihood constraints; and
- Poverty Indicators.

The community level questionnaire was designed to collect village data such as access and use of common resources, community tree plantation and seasonal farm gate prices.

Large Scale Farm questionnaire was administered to all the large scale farms either privately or corporately managed. However, the analysis of Large Scale Farms is presented in a separate report (Volume IV).

2.3 Census Methodology

The main focus at all stages of the census execution was on data quality and this has been emphasized all the time. The main activities undertaken include:

- Census organization;
- Tabulation plan preparation;
- Sample design;
- Design of census questionnaire and other instruments;
- Pilot test;
- Training of trainers, supervisors and enumerators;
- Information Education and Communication (IEC) campaign;
- Data collection;
- Field supervision and consistency checks;
- Data processing:
 - Scanning,
 - Structure formatting application,
 - Batch validation application,
 - Manual data entry application,
 - Tabulation preparation using SPSS;
- Table formatting and charts using Excel, maps generation using Arc GIS and Excel, Report preparation using Ms Word and Excel.

2.3.1 Census Organization

The census was conducted by the National Bureau of Statistics (NBS) in collaboration with Ministries of Agriculture, Food Security and Cooperatives, Livestock and Fisheries Development; Water; Industry and Trade; and the Prime Minister's Office, Regional Administration and Local Government in Tanzania Mainland. The Office of the Chief Government Statistician (OCGS) and Ministries of Agriculture and Natural Resources, Livestock and Fisheries in Tanzania Zanzibar.

At the national level, the Census was headed by the Director General of the National Bureau of Statistics, Tanzania Mainland in collaboration with the Chief Government Statistician, Tanzania Zanzibar. The planning Group formed by the Director General of NBS and the Chief Government Statistician consisted of staff from the Department of Agriculture Statistics of NBS, Department of

Economic Statistics of OCGS, Department of Policy and Planning of the Ministry of Agriculture, Food Security and Cooperatives, Department of Policy and Planning of the Ministry of Livestock and Fisheries Development in the Mainland, and Ministry of Livestock and Fisheries and the Ministry of Agriculture and Natural Resources in Zanzibar.

The Planning Group was responsible for all the census operations. Implementation of the census activities at the regional level was overseen by the Regional Statistical Managers of NBS and the Regional Agricultural Supervisors from the Prime Minister's Office, Regional Administration and Local Government. At the district level, the census activities were managed by two supervisors from the Prime Minister's Office, Regional Administration and Local Government (PMO-RALG). The supervisors managed the enumerators who also came from PMO-RALG. As for Zanzibar, implementation of the census activities at the regional level was overseen by the Regional Statistical Officers and Regional Agricultural Officers. At District level, implementation of the census activities was managed by District Agricultural Development Officers (DADOs). In addition, there was a national mobile team to supervise the census operations.

The Censuses and Surveys Technical Working Group (CSTWG) under MKUKUTA provided support in sourcing financing, approving budget allocation and monitoring progress of the census. A Technical committee for the census was established with members from key stakeholder organizations and its main function was to approve the proposed instruments and procedures developed by the Planning Group. It also approved the tabulation and analytical reports prepared from the census data.

2.3.2 Tabulation Plan Preparation

The tabulation plan was developed considering the tabulations from previous censuses and surveys to allow trend analysis and comparisons as well as the needs of end users.

2.3.3 Sample Design

The Mainland sample consisted of 3,192 villages. These villages were drawn from the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) to serve as national framework for the conduct of household based surveys in the country. The National Master Sample was developed from the 2002 Population and Housing Census. The total Mainland sample was 47,880 agricultural households. In Zanzibar, a total of 317 Enumeration Areas (EAs) were selected

and 4,755 agricultural households were covered. National wide, all regions and districts were sampled except four urban districts (three from Mainland and one from Zanzibar).

In both Mainland and Zanzibar, a two stage sample was used. The number of villages/Enumeration Areas (EAs) was selected for the first stage with a probability proportional to the number of villages/EAs in each district. In the second stage, 15 households were selected from a list of households in each village/EA using systematic random sampling. Table 1.1 gives the sample size of households, villages and districts for the Mainland and Zanzibar.

Table 2.1: Census Sample

Description	Mainland	Zanzibar	Total
Households	47,880	4,755	52,635
Villages/EAs	3,192	317	3,509
Districts	133	9	142
Regions	21	5	26

2.3.4 Questionnaire Design and Other Census Instruments

The questionnaire was designed following users meetings to ensure that the questions asked were in line with the users data needs. Several features were incorporated into the design of the questionnaire to increase the accuracy of the data as follows:

- Where feasible, all variables were extensively coded to reduce post enumeration coding errors;
- The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the respondent;
- The responses to all the questions were placed in boxes printed on the questionnaire, with one box per character. This feature made it possible to use scanning and Intelligent Character Recognition (ICR) technologies for data capture;
- Skip patterns were used to reduce unnecessary and incorrect coding of sections which do not apply to the respondent; and
- Each section was clearly numbered, which facilitated the use of skip patterns and provide a reference for data type coding for the programming of CSPro and SPSS.

Three other instruments were used:

- Village Listing Forms were used for the listing of households in the village/EA and from this list, a systematic sample of 15 agricultural households were selected;

- A training manual which was used by the trainer for the cascade/pyramid training of supervisors and enumerators; and
- Enumerator's Instructions Manual was used as reference material.

2.3.5 Field Pilot-Testing of the Census Instruments

The questionnaire was pilot-tested in four locations, namely Arusha, Dodoma, Unguja, and Pemba. This was done to check the wording, flow and relevance of the questions and to finalize crop lists, questionnaire coding and manuals. In addition, several data collection methodologies had to be finalized, namely; livestock numbers in pastoral communities, mixed cropping, use of percentages in the questionnaire and finalizing skip patterns and documenting consistency checks.

2.3.6 Training of Trainers, Supervisors and Enumerators

During the training, a cascade/pyramid training techniques were employed to maintain statistical standards. The top level of training was provided to 78 national and regional supervisors (65 from Mainland and 13 from Zanzibar). The trainers were members of the Planning Group from the National Bureau of Statistics, the sector Ministries of Agriculture and Office of the Chief Government Statistician, Zanzibar. In each region, three training sessions were conducted for the district supervisors and enumerators. The training concentrated on questionnaires, listing forms, field level census methodology and definitions. Emphasis was placed on consistency checking in the field. Tests were given to the enumerators and supervisors and the best 50 percent of the trainees were selected for the actual field work. The remaining 50% were assigned the work of listing the households in the villages they belong and they were later terminated. The best trained enumerators were assigned to list the remaining villages. Each enumerator was assigned to enumerate two villages.

2.3.7 Information, Education and Communication (IEC) Campaign

Radios, televisions, newspapers, leaflets, t-shirts and caps were used to create awareness of the Agricultural Sample Census to the public. This strategy helped in sensitizing the public for the field level activities in order to increase the response rate. The t-shirts and caps were given to the field staff and the village chairpersons. The village chairpersons assisted to locate the selected households.

2.3.8 Data Collection

Data collection activities for the 2007/08 Agricultural Sample Census lasted for three months from June to August 2009. The direct interview method was used to collect data during the enumeration. Data collection was monitored by a hierarchical system of supervisors which included the Mobile Response Team, Regional and District Supervisors. The Mobile Response Team headed by the Manager of Agriculture Statistics Department, provided the overall direction to the field operations and responded to queries arising outside the scope of the training exercise. Decisions made on the definitions and procedures were then communicated back to all the enumerators via the Regional and District Supervisors. On the Mainland, each region had 2 Regional Supervisors (total of 42) and 2 district supervisors per district, (Total 266).

District supervision and enumeration were performed by staff from the Prime Minister's Office, Regional Administration and Local Government and the sector Ministry of Agriculture (PMO-RALG). Regional and national supervision was provided by senior staff from the NBS and sector Ministries of Agriculture. In Zanzibar, the enumeration was conducted by staff from the Ministry of Agriculture and Natural Resources and Ministry of Livestock and Fisheries. Supervision was provided by senior officers of the same Ministries and the Office of the Chief Government Statistician.

During the household listing exercise, some 3,192 extension staff participated on the Mainland. A total of 177 enumerators participated during the listing exercise and enumeration using the small holder questionnaire in Zanzibar. A total of 1,596 enumerators were involved in data collection using the small holder questionnaire on the Mainland. Additional five percent of the enumerators were held as reserves in case of drop outs during the enumeration exercise.

2.3.9 Field Supervision and Consistency Checks

Enumerators were trained to probe the respondents until they were satisfied with the responses before they recorded them in the questionnaire. The first check on the questionnaire was carried out by the enumerators in the field during enumeration, followed by District, Regional and National supervisors. Supervisory visits at all levels of supervision focused on checking the completeness of the questionnaires and consistency. Inconsistencies encountered were corrected, and where necessary, a call back to the respondent was made by the enumerator to obtain the correct information. Further quality control checks were made by the district supervisors.

2.3.10 Data Processing

Data processing involved the following process:

- Data entry;
- Data structure formatting;
- Batch validation; and
- Tabulation.

Data Entry

Scanning and ICR data capture technology was used. This did not only increase the speed of data entry but also increased the accuracy due to reduction of keystroke errors. Interactive validation routines were incorporated into the ICR software to trap errors during the verification process.

Prior to scanning, all the questionnaires underwent a manual cleaning exercise by checking that the questionnaire had a full set of pages, correct identification and good hand-writing. A score was given to each questionnaire based on the legibility and the completeness of enumeration. This score was used to assess the quality of enumeration and supervision. CSPro was used for data entry of the questionnaires that were rejected by the ICR extraction application.

Batch Validation

A batch validation program was developed in CSPro in order to identify inconsistencies within a questionnaire. This was in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. After data cleaning, the tables were prepared based on a pre-designed tabulation plan.

Tabulation

Statistical Package for Social Sciences (SPSS) was used to produce the census tables and Microsoft Excel was used to organize the tables and compute the additional indicators. Excel was also used to produce charts while Arc GIS was used for generating the maps.

Report Writing

The report writing was outsourced to Sokoine University of Agriculture. It focused on the regional comparisons, time series and national estimates. Microsoft Excel was used to produce charts; Arc

GIS and Excel were used to generate maps, whereas Microsoft Word was used in compiling and report writing.

Data Quality Control

A great deal of emphasis was placed on data quality throughout the whole exercise, from planning; questionnaire design, training, supervision, data entry, validation and cleaning/editing. As a result of this, it is believed that the census is highly accurate and representative of what was experienced at the field level during the census year. With very few exceptions, the variables in the questionnaire are within the norms for Tanzania and they follow the expected time series trends when compared to historical data.

2.4 Funding Arrangements

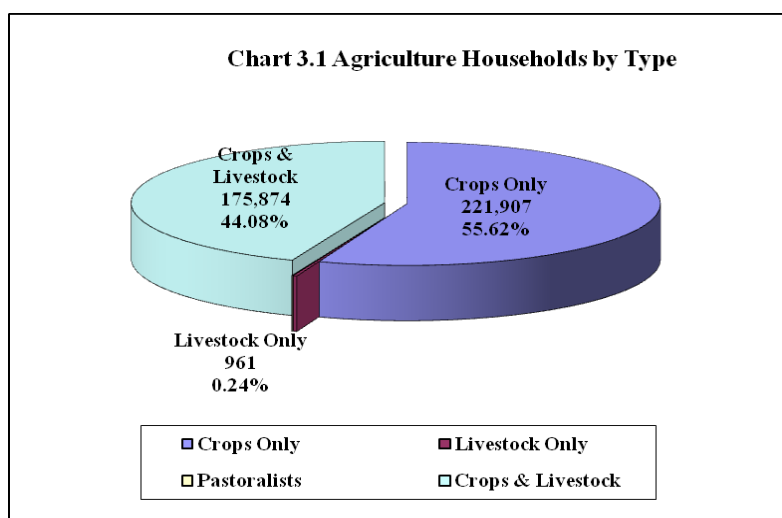
The 2007/08 Agricultural Sample Census was supported mainly by the Department for International Development (DFID) and the Japan International Cooperation Agency (JICA) which together, financed most of the operational activities. Other funds for the census activities were from the Government of Tanzania. In addition, technical assistance was provided by the Food and Agriculture Organisation (FAO).

3. CENSUS RESULTS AND ANALYSIS

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Mwanza region was 398,993. Geita had the largest number of agricultural households (112,162) followed by Sengerema (81,979), Magu (64,220), Kwimba (51,796), Missungwi (38,009), Ukerewe (37,302), and Ilemela had the smallest number of households



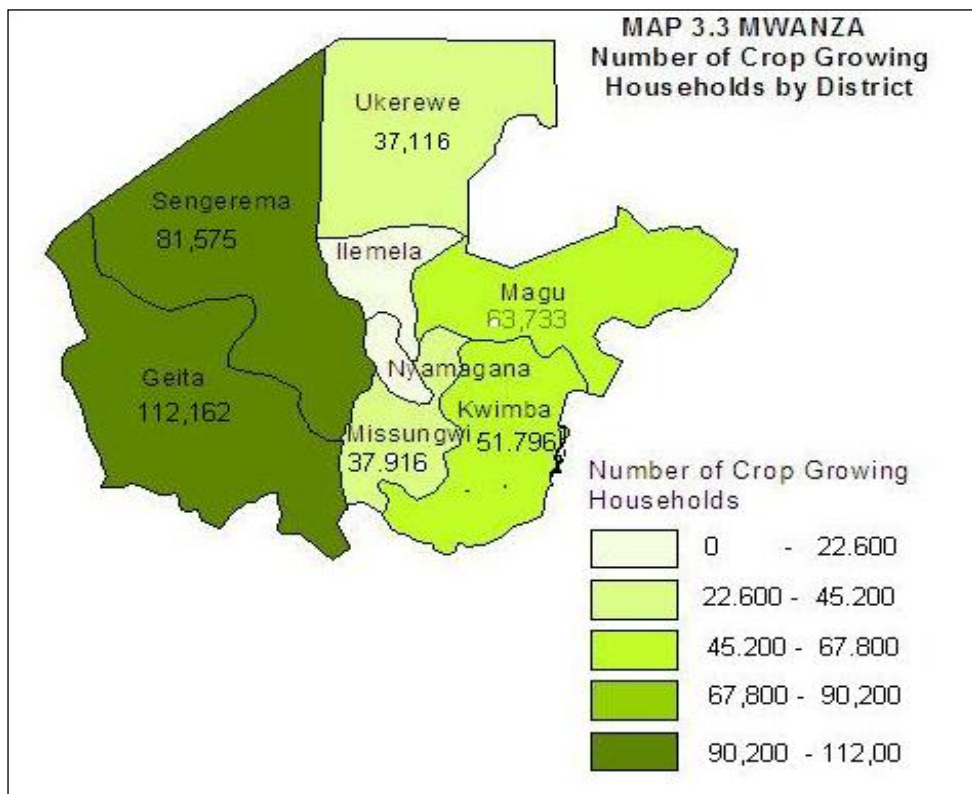
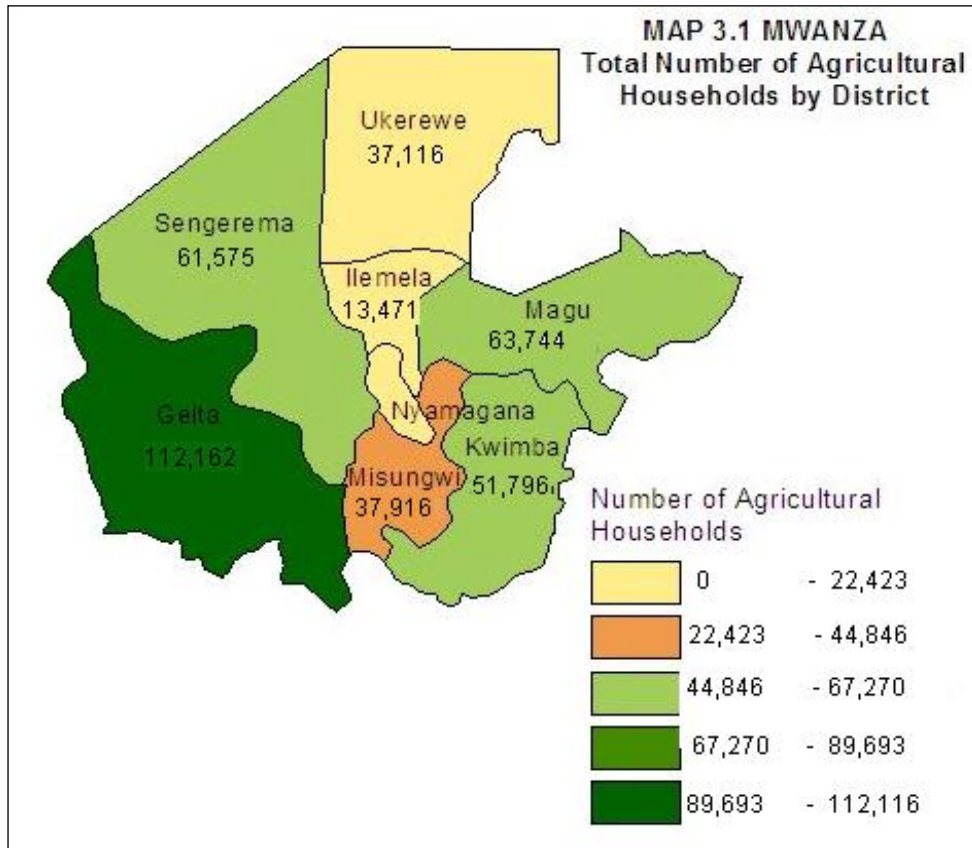
(13,524) (Map 3.1). Majority of households were involved in crop production (221,907, 55.62%) followed by crops and livestock (175,874, 44.08%), livestock only (961, 0.24%), and pastoralists only (251, 0.06%) (Table 3.1a, Chart 3.1 Map 3.1). Furthermore, Magu had the highest density of agricultural households per km² of land (1,487) while Ilemela had the lowest density (1,146) (Map 3.2).

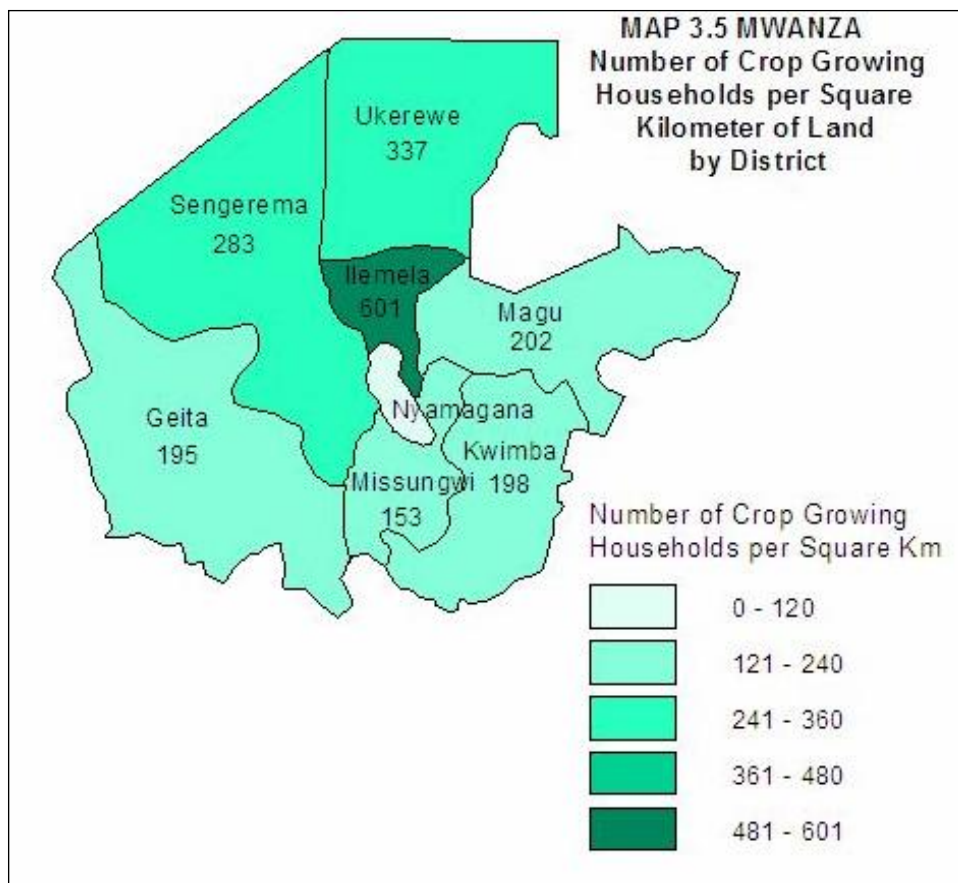
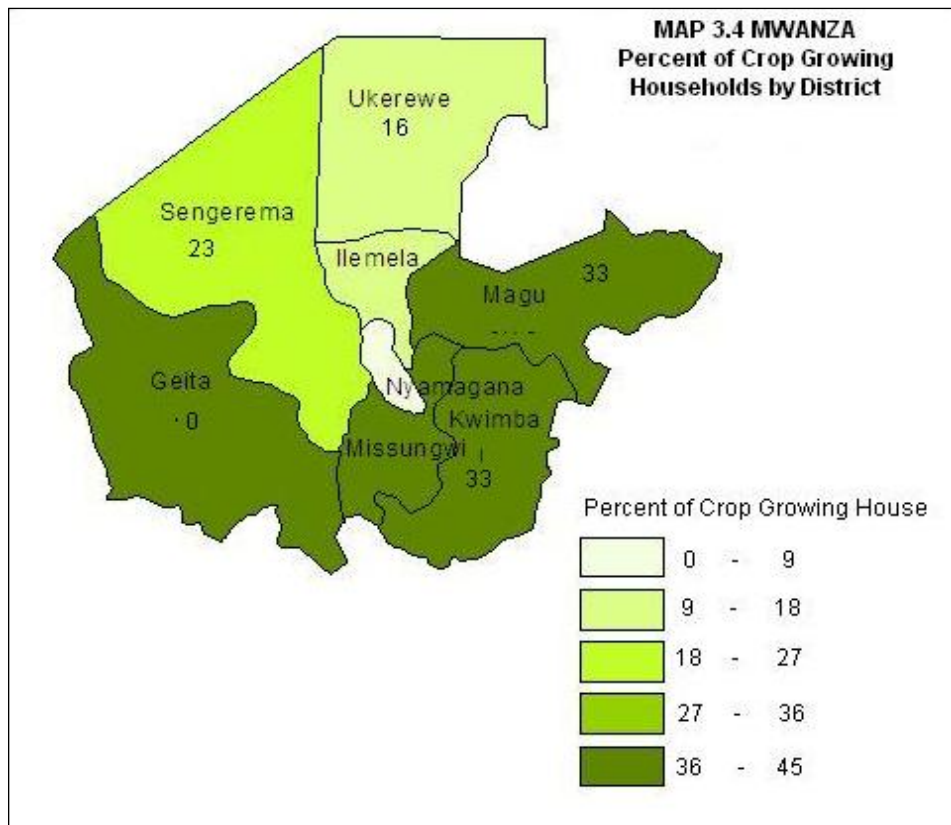
Geita had the largest number of crop growing households (65,635) while Ilemela had the smallest number (9,334) (Map 3.3). Regarding percent of crop growing households,

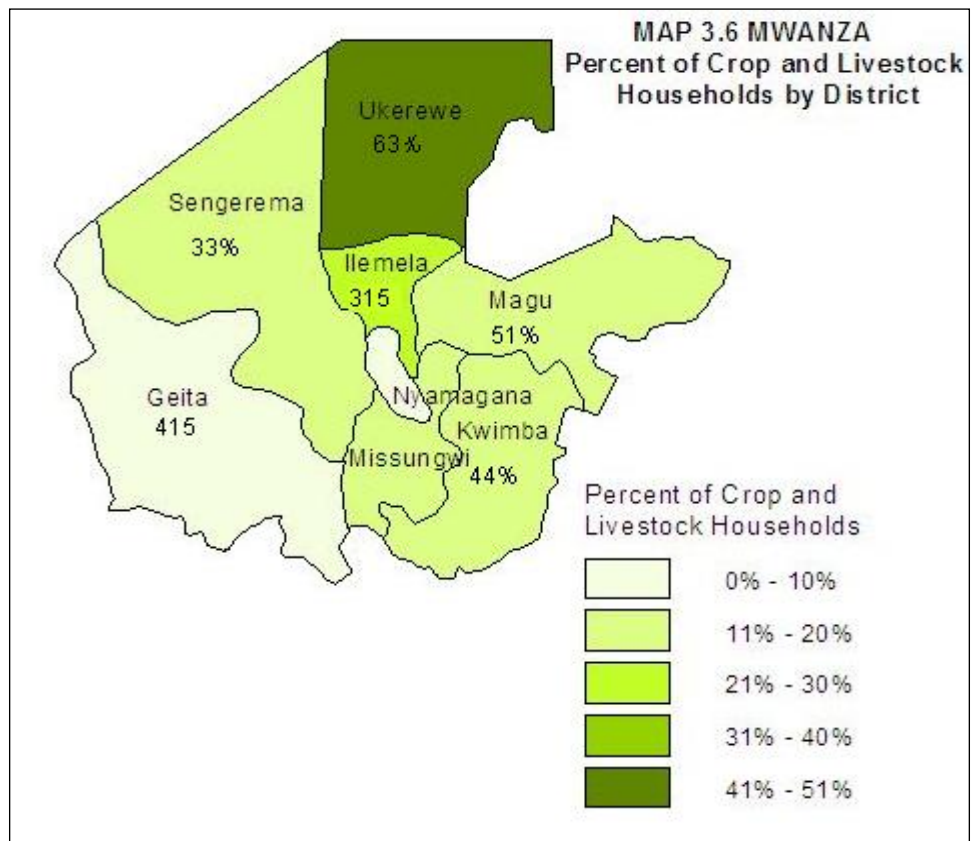
Table 3.1a Agriculture Households by Type in Mwanza Region in 2007/08

District	Crops Only	Livestock Only	Pastoralists	Crops & Livestock
Ukerewe	13,447	92	92	23,671
Magu	31,238	317	159	32,506
Kwimba	29,031	0	0	22,765
Sengerema	54,451	405	0	27,124
Geita	65,635	0	0	46,526
Missungwi	18,770	94	0	19,145
Ilemela	9,334	53	0	4,137
Total	221,907	961	251	175,874

Ukerewe had the highest percent (29%) while the lowest percent was recorded in Missungwi (12%) (Map 3.4). On the other hand, the number of crop growing households per km² varied widely across districts. The highest density was reported in Ilemela (601) while Missungwi had the lowest (153) (Map 3.5). Moreover, the highest percent of crop growing and livestock keeping households was recorded in Ukerewe (51%) while the lowest percent was reported in Geita (10%) (Map 3.6).







3.1.2 Livelihood Activities/Source of Income

Majority of households in Mwanza region depended on crop farming as their main occupation (52.6%) followed by livestock keeping/herding (0.7%), fishing (0.2%), and pastoralist (0.1%). Dependence on crop farming as the main occupation ranged from 54.9% in Geita to 47.5% in Ilemela. Also, Ilemela had the highest percent of households involved in livestock herding (2.8%) while Sengerema had the highest percent of households engaged in fishing (0.3%) (Table 3.1b).

Table 3.1b Households main occupation in Mwanza Region in 2007/08

District	Main Activity							
	Crop Farming		Livestock Keeping / Herding		Livestock Pastoralist		Fishing	
	Number	%	Number	%	Number	%	Number	%
Ukerewe	350411	50.5	5234	0.8	498	0.1	498	0.1
Magu	160397	51.5	2848	0.9	0	0.0	388	0.1
Kwimba	155680	51.7	2552	0.8	269	0.1	269	0.1
Sengerema	333513	53.5	2704	0.4	1622	0.3	1622	0.3
Geita	209216	54.9	1304	0.3	163	0.0	163	0.0
Missungwi	125397	54.3	2905	1.3	401	0.2	200	0.1
Ilemela	33910	47.5	2021	2.8	88	0.1	88	0.1
Total	1522475	52.6	20877	0.7	3041	0.1	4421	0.2

3.1.3 Sex and Age of Heads of Households

The number of male-headed agricultural households in Mwanza region was 334,519 (83.8% of the total regional agricultural households) whilst the female-headed households were 64,474 (16.2% of the total regional agricultural households) (Table 3.2). The mean age for household heads was 46 years (45 years for male heads and 51 years for female heads) (Chart 3.2).

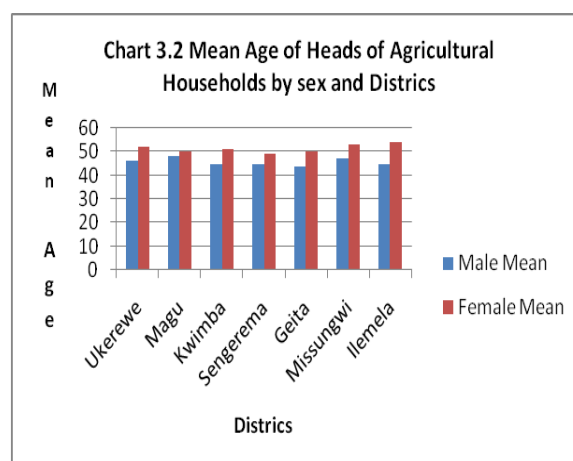


Table 3.2 Number and Mean age of Heads of Agricultural Households by sex of head and District

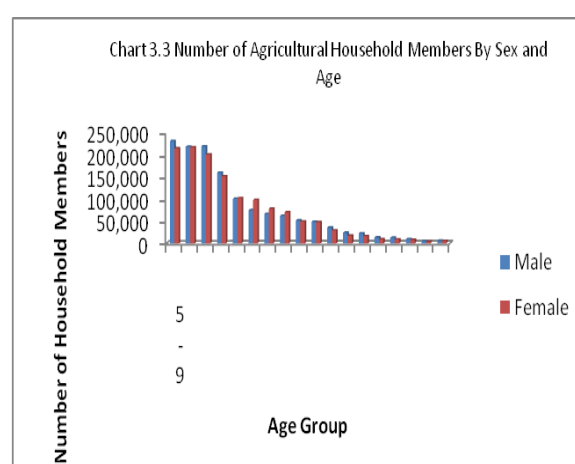
Region	Male		Female		Total
	Number	Percent	Number	Percent	
Ukerewe	32,697	88	4,605	12	37,302
Magu	52,803	82	11,417	18	64,220
Kwimba	41,821	81	9,976	19	51,796
Sengerema	69,227	84	12,752	16	81,979
Geita	95,545	85	16,617	15	112,162
Missungwi	30,971	81	7,039	19	38,009
Ilemela	11,456	85	2,068	15	13,524
Total	334,519	84	64,474	16	398,993

3.1.4 Age and Sex of Household Members

Mwanza region had a total rural agricultural population of 2,695,703 of whom 1,364,779 (51%) were males and 1,330,924 (49%) were females.

However, the distribution of household members by age and sex shows that male members outnumbered their female counterparts in the following age groups: less than 4 to 15-19 years; 40-44 to Above 85 years. On the other hand, female

members outnumbered their male counterparts in the following age groups: 25-29 to 35-39 years (Chart 3.3).



3.1.5 Level of Education

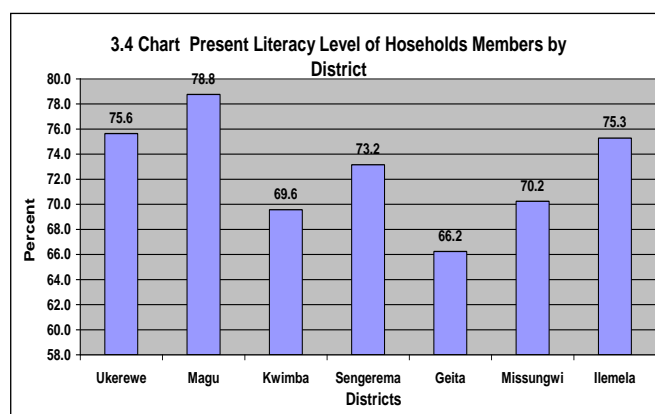
Data on literacy and education attainment were obtained for all household members aged five years and above.

Literacy

Data on literacy level for household members aged five years and above were obtained by asking individual households whether their respective household members could read and write in Kiswahili only, English only, both English and Swahili or in any other language. In short, literacy was based on the ability to read and write Kiswahili, English or both.

Literacy Level of Household Members

The level of literacy level of household members in Mwanza was 71.6 (1,609,744) and those who could not read and write accounted for only 38.4% (638,985) of household members. Magu recorded the highest literacy level (78.8%) while Geita recorded the lowest literacy level (66.2%) (Chart 3.4).



Generally, household members had the highest level of literacy in Swahili (1,475,212, 65.6%) followed by Swahili and English (127,792, 5.68%), and any other language (6,740, 0.003%).

At district level, Geita had the highest percent of literacy level of household members in Swahili (28 %) and the lowest level was recorded in Ilemela (3 %). Magu recorded the highest level in Swahili and English (34%) while Ilemela had the lowest level of literacy in the two languages (2%). With respect to other languages, Kwimba recorded the highest percent of literacy level (47%) while Ukerewe had the lowest percent (5%) (Table 3.3).

Table 3.3 Present Literacy Level of Household Members by District

District	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Read and Write		Total
	Number	%	Number	%	Number	%	Number	%	Number	%	
Ukerewe	143,314	10	8,750	7	368	5	49,092	8	152,433	75.6	201,524
Magu	245,937	17	42,813	34	0	0	77,856	12	288,750	78.8	366,607
Kwimba	176,107	12	16,498	13	3,197	47	85,688	13	195,803	69.6	281,490
Sengerema	308,485	21	18,218	14	405	6	120,034	19	327,108	73.2	447,142
Geita	408,490	28	26,033	20	2,769	41	222,939	35	437,292	66.2	660,230
Missungwi	143,872	10	12,670	10	0	0	66,352	10	156,542	70.2	222,894
Ilemela	49,006	3	2,811	2	0	0	17,025	3	51,817	75.3	68,841
Total	1,475,212	100	127,792	100	6,740	100	638,985	100	1,609,744	71.6	2,248,729

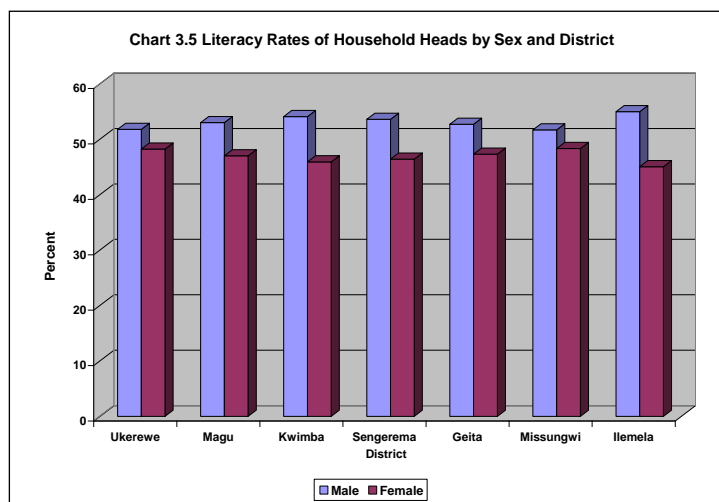
Literacy Rates of Heads of Households

The literacy rate of the heads of households in the region was 59%. The literacy rate of the male heads of households was 53% (852,935) and that of female heads was 47% (756,810). Also, the literacy rate of male heads was higher than that of female heads in all districts. The district with the highest literacy rate amongst male heads of households was Ilemela (55%) while Ukerewe and Missungwi recorded the lowest level (52%). On the part of female heads of household, the highest

rate was recorded in Ukerewe and Missungwi (48%) while the lowest was reported in Ilemela (45%) (Chart 3.5).

Educational Status

Data on educational status was collected from individual agricultural households. The results show that 38% (844,053) of the population aged 5 years and above in agricultural households had completed different levels of education followed by 37% (830,572) who were attending school while 25% (574,105) never attended school (Table 3.4, Chart 3.6).

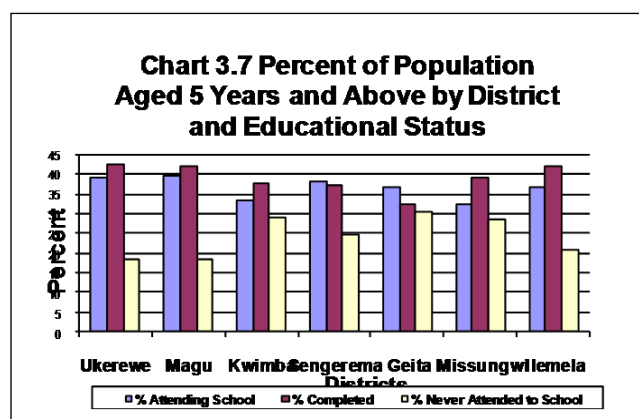


Ukerewe, Magu, and Ilemela had the highest percent of persons aged 5 years and above who had completed education (42%) while Geita had the lowest percent (33%). In the category of those

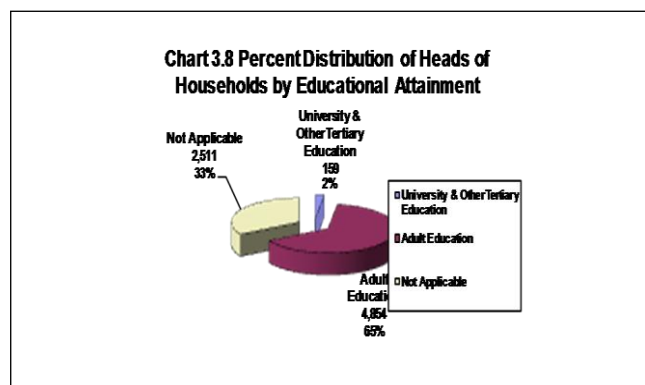
Table 3.4 : Number of Household Members by Education Status and District

District	School Attendance							
	Attending School		Completed		Never Attended to School		Total	
	Number	%	Number	%	Number	%	Number	%
Ukerewe	78,841	39	85,381	42	37,302	19	201,524	100
Magu	146,199	40	153,493	42	66,915	18	366,607	100
Kwimba	94,128	33	105,895	38	81,467	29	281,490	100
Sengerema	170,436	38	167,198	37	109,508	24	447,142	100
Geita	243,432	37	215,461	33	201,337	30	660,230	100
Missungwi	72,077	32	87,562	39	63,255	28	222,894	100
Ilemela	25,458	37	29,064	42	14,320	21	68,841	100
Total	830,572	37	844,053	38	574,105	25	2,248,729	100

who had never been to school, the highest percent was recorded in Geita (30%) while Magu had the lowest percent (18%). Regarding persons still attending school, Magu had the highest percent (40%) while Missungwi recorded the lowest percent (32%) (Chart 3.7).



Regarding educational attainment of heads of household, majority (4,854, 65%) had attained adult education while those with university and other tertiary education were only 2% (159). On the other hand, 33% (2,511) belonged to the not applicable category (Chart 3.8).



Kwimba (1790) had the highest percent of household heads with adult education attainment (2%) and the lowest percent was reported in Ilemela (106). On the other hand, all heads of household who attained university/tertiary education were recorded in Ilemela (159) which is equivalent to 1% (Table 3.5).

Table 3.5 Percent Distribution of Heads of Households by Educational Attainment

District	Education Level							
	University & Other Tertiary Education		Adult Education		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Ukerewe	0	0	184	0	645	1	85,381	100
Magu	0	0	476	0	317	0	153,493	100
Kwimba	0	0	1,790	2	256	0	105,895	100
Sengerema	0	0	810	0	405	0	167,198	100
Geita	0	0	831	0	554	0	215,461	100
Missungwi	0	0	657	1	282	0	87,562	100
Ilemela	159	1	106	0	53	0	29,064	100
Total	159	0	4,854	1	2,511	0	844,053	100

3.1.6 Off-farm Income

Off farm income refers to cash generated from non-agricultural activities. This can be from permanent or temporary employment by the government, private sector, other public institutions etc. It also includes cash generated from working on farms belonging to other farmers.

In Mwanza region 48% of the Households had only one member of the household generating off-farm income, and an equal 31% of households had either two members two members or more than two members generating off-farm income (Table 3.6).

Data in Table 3.6 reveal that Magu district had the highest percent (76%) of households whose income was generated by one household member followed by Misungwi district (75%), Ukerewe (71%), Sengerema and Geita (69%) while both Ilemela and Kwimba had the lowest percent (48%). Ilemela recorded the highest percentage of households whose off-farm income was generated by two household members (31%) while the lowest percent was reported in Magu (11%). Besides, Kwimba and Ilemela recorded the highest percent of households whose income was generated by more two s (21%) while Sengerema had the lowest percent (5%) (Table 3.6).

District	Off-farm income generated by one household member		Off-farm income generated by two household members		Off-farm income generated by more than two household members		Total	
	Count	%	Count	%	Count	%	Count	%
Ukerewe	14,368	71	4,237	21	1,750	9	20,355	100
Magu	18,235	76	2,696	11	3,171	13	24,102	100
Kwimba	8,313	48	5,244	30	3,709	21	17,265	100
Sengerema	26,922	69	10,121	26	2,024	5	39,067	100
Geita	27,694	69	8,031	20	4,154	10	39,880	100
Misungwi	14,171	75	3,097	16	1,595	8	18,864	100
Ilemela	2,599	48	1,697	31	1,167	21	5,463	100

3.2 Land Use

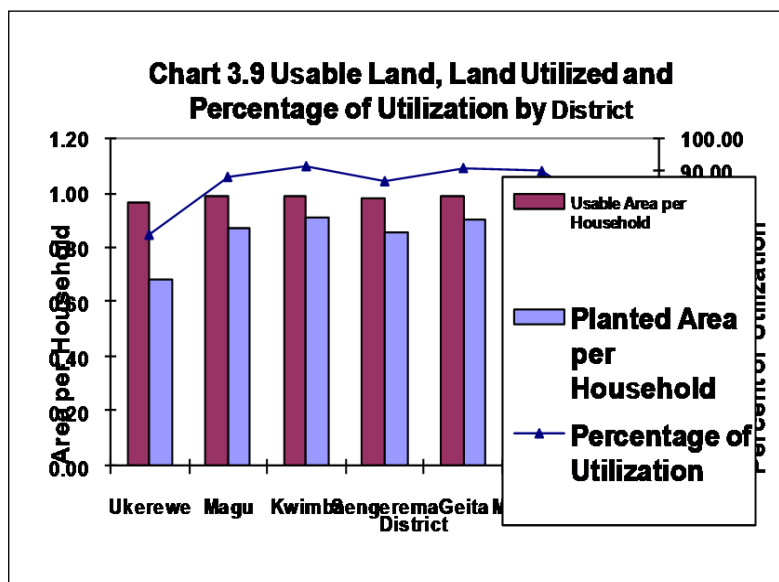
Land area and planted area are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on it in one year. Planted area is the total area of crops planted in a year and the area is summed even if there were more than one crop on the same land per year. A number of terms are used in this section which requires defining for clarification as follows:

Land available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does not mean the total area of land that is designated as agriculture land in the country; but it is the land that is available to smallholders given the location of villages and lack of access to more remote parcels of unused agriculture designated land. Usable land refers to the available minus the land that cannot be used e.g. bare rock, shallow soils, steep swamp areas etc. It does however include un-cleared bush. Utilized land refers to the land that was used during a period of one year.

3.2.1 Area of Land Utilized

The total area of land available to smallholders was 995,890 ha while the average usable area per household was 0.99 ha. On average, about 89% of the total usable land was utilized and only 11% was not (Table 3.7).

Except for Ukerewe, which had 0.97 ha of usable area per household, all the other districts had 0.99 ha usable area per household. Furthermore, Kwimba had the largest planted area per household (0.91 ha) while Ukerewe had the smallest planted area per household (0.68 ha). On the other hand, Kwimba had the highest percent of land utilization



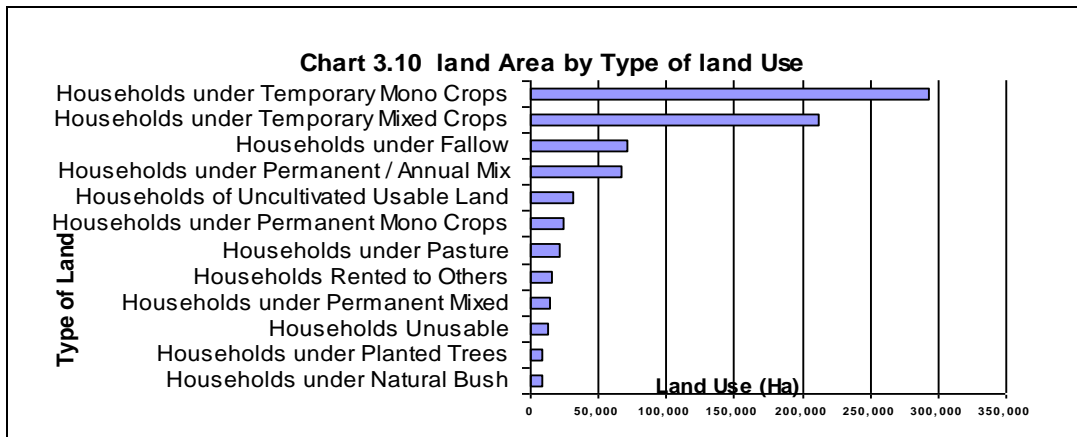
(91.74%) while Ukerewe had the lowest percent (70.44%) (Chart 3.9, Map 3.7).

Table 3.7 Utilized and Planted Area per Household in Mwanza Region in 2007/08

District	Number of Households	Usable Area Available	Planted Area	Usable Area per Household	Planted Area per Household	Percentage of Utilization
Ukerewe	39,927	38,638	27,217	0.97	0.68	70.44
Magu	154,982	153,079	135,319	0.99	0.87	88.40
Kwimba	146,725	145,574	133,552	0.99	0.91	91.74
Sengerema	192,469	189,433	164,941	0.98	0.86	87.07
Geita	336,159	332,004	302,649	0.99	0.90	91.16
Missungwi	122,921	121,795	109,876	0.99	0.89	90.21
Ilemela	15,526	15,367	11,443	0.99	0.74	74.46
Total	1,008,709	995,890	884,995	0.99	0.88	88.86

3.2.2 Types of Land Use

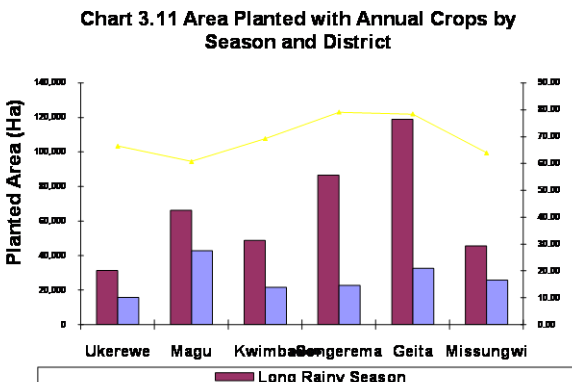
The most important land use type was temporary mono crops (410,253 ha). This accounted for about 38% followed by temporary mixed crops (253,078 ha, 27.2%), fallow (78,887 ha, 9.13), permanent annual mix (77,583 ha, 8.57%), and uncultivable usable land (53,585 ha, 4.01%). The remaining land area was put to other types of land use (Chart 3.10).



3.3 Annual Crops and Vegetable Production

Mwanza region has a bimodal rainfall pattern with the short rains starting in October –December while the long rains begin in March to May. Both seasons are significant for production of different crops.

3.3.1 Area Planted

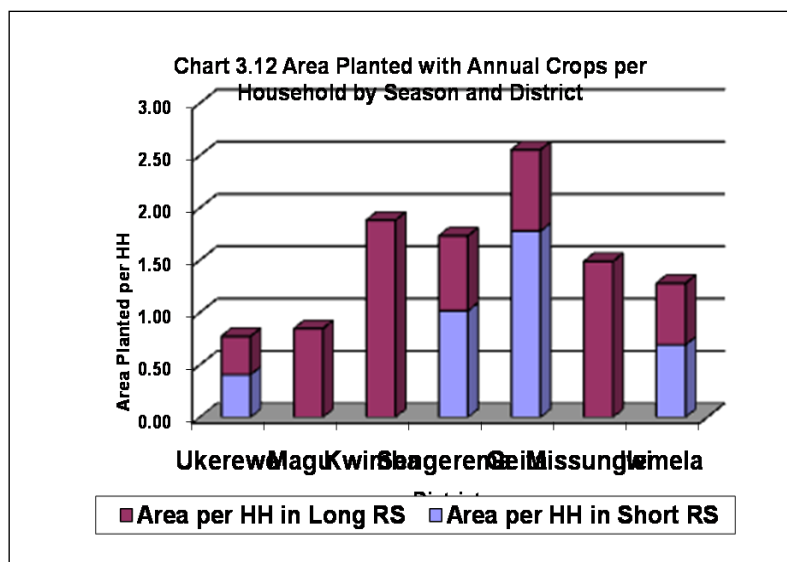


The area planted with annual crops and vegetables was 665,870 ha out of which 512,358 ha (76%) were planted during the short rainy season while only 153,512 ha (24%) were planted during the long rainy season (wet season) (Chart 3.11).

The average planted area per household during the long rainy season and short rainy season was 2.75 ha and 2.33 ha respectively. Generally, agricultural production during the short rainy season was quite limited. During the long rainy season Kwimba had the largest area planted area (39,253 ha) followed by Magu (32,667 ha), Misungwi (30,884ha), Geita (24,727), Sengerema (16,217ha), Ukerewe (5,428 ha) while Ilemela had the smallest planted area (4,335 ha). Furthermore, Geita had the largest planted area in the short rainy season (189,736 ha) followed by Magu (91,503 ha), Sengerema (78,120ha), Kwimba (76,999ha), Missungwi

(58,745ha), Ukerewe (12,000 ha) and the smallest area was recorded in Ilemela (5,254 ha) (Chart 3.11).

On the basis of area planted with annual crops per household during the short rainy season, Geita had the largest area planted with annual crops per household (1.78

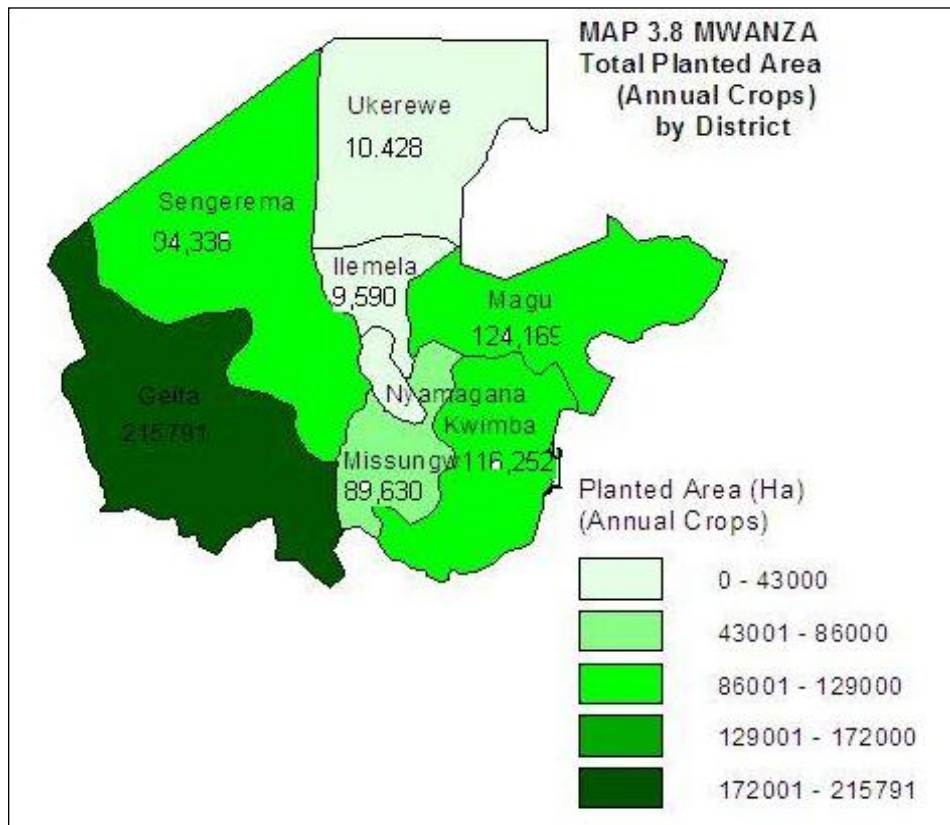
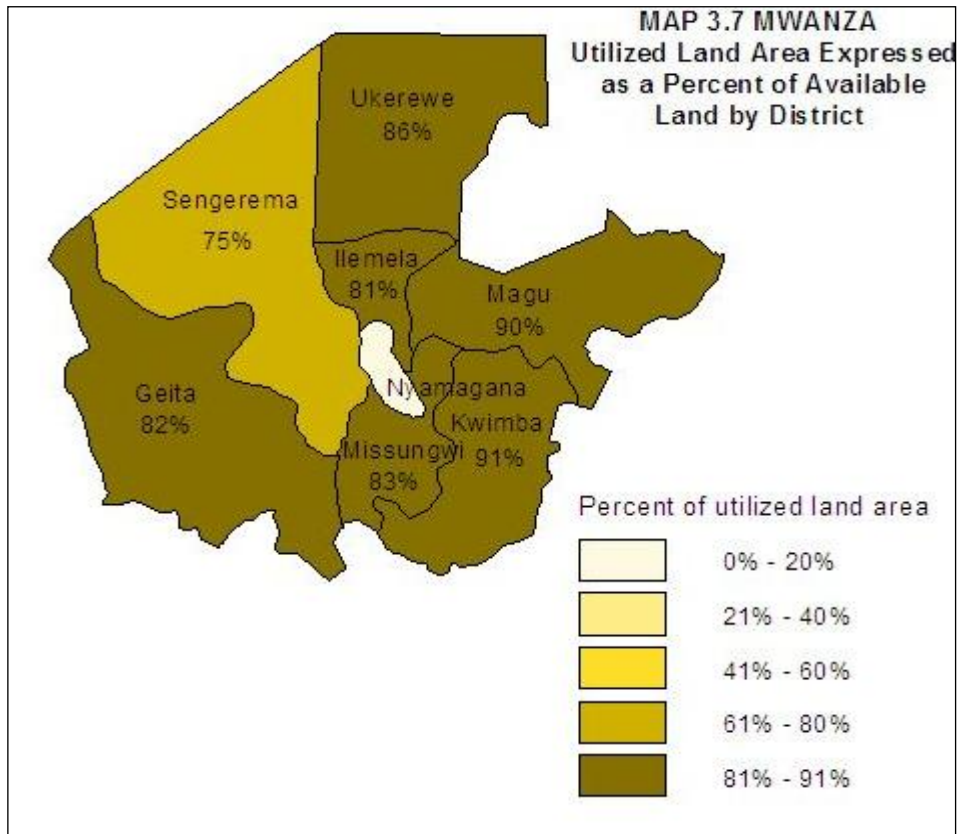


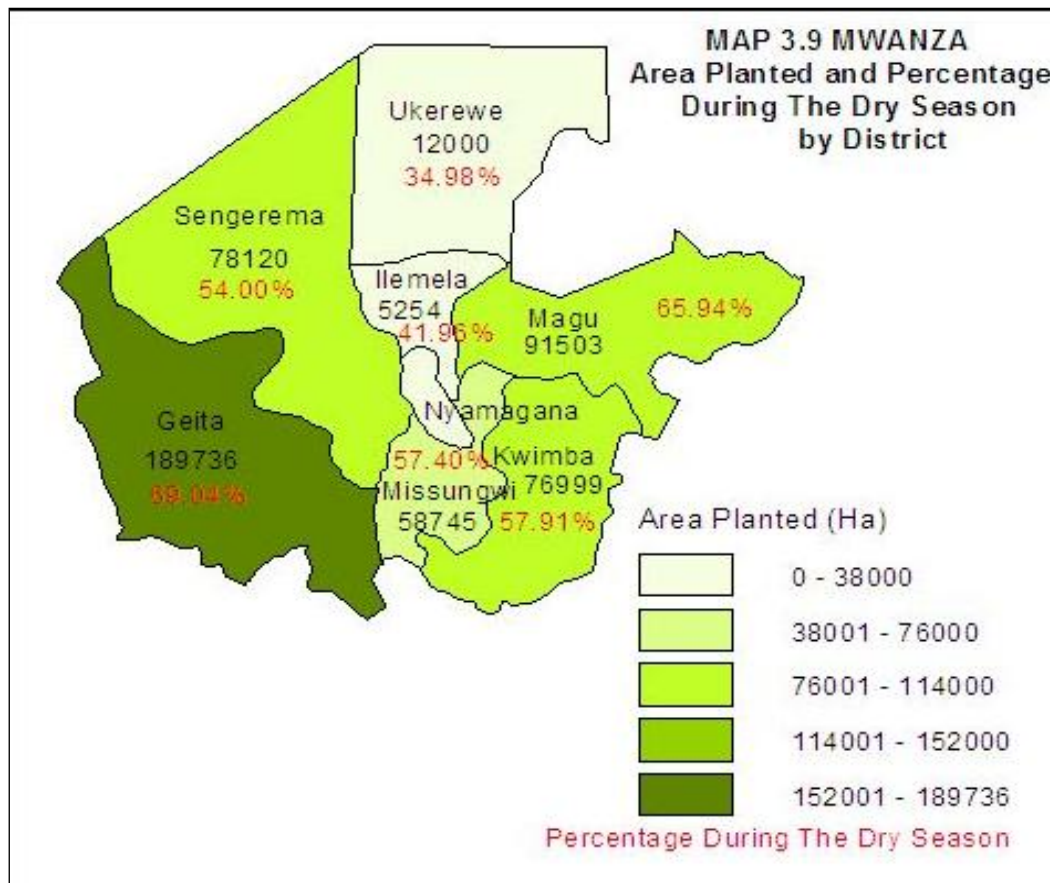
ha). On the other hand, Kwimba had the largest planted area during the long rainy season (1.88 ha) while Ukerewe recorded the smallest area per household (0.37 ha) (Table 3.8, Chart 3.12).

Table 3.8 Number of Households, Area Planted with Annual Crops and Area per Household by Season and District

District	Number of HH - Short RS	Area Planted in Short Rainy Season	Area per HH in Short RS	Number of HH in Long RS	Area Planted in Long Rainy Season	Area per HH in Long RS
Ukerewe	29,473	12,000	0.41	14,829	5,428	0.37
Magu	51,534	91,503	0.00	38,532	32,667	0.85
Kwimba	43,739	76,999	0.00	20,846	39,253	1.88
Sengerema	76,717	78,120	1.02	22,671	16,217	0.72
Geita	106,623	189,736	1.78	31,848	24,727	0.78
Missungwi	32,191	58,745	0.00	20,741	30,884	1.49
Ilemela	7,584	5,254	0.69	7,372	4,335	0.59
Total	347,861	512,358		156,839	153,512	

Regarding total planted area, Geita had the largest total planted area (215,791 ha) while Ilemela had the smallest planted area (9,590 ha) (Map 3. 8). Also Geita had both the largest planted area (189,736 ha) and percent (69.04%) during the dry season while Ilemela had the smallest planted area (5,254 ha) but the lowest percent of planted area was recorded in Ukerewe (34.98%) (Map 3.9).



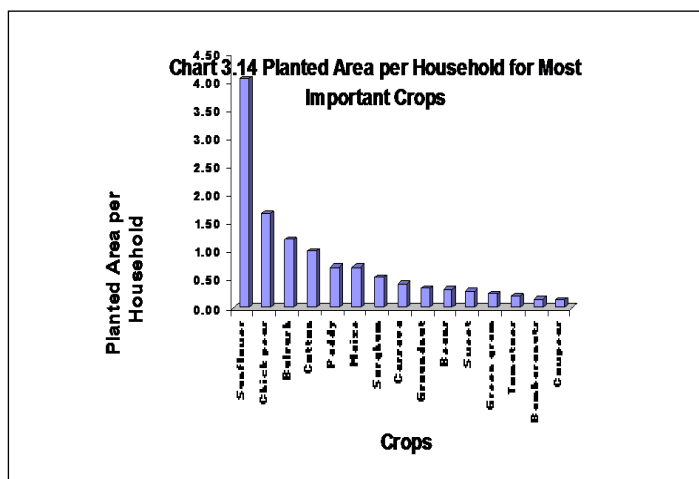
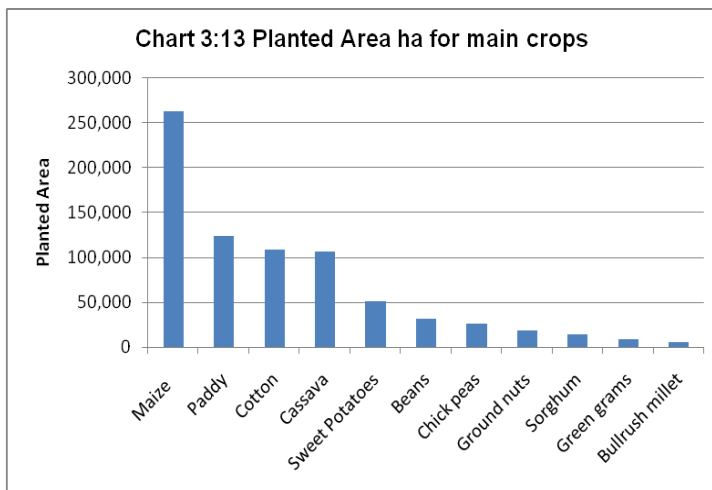


Analysis of the Most Important Crops

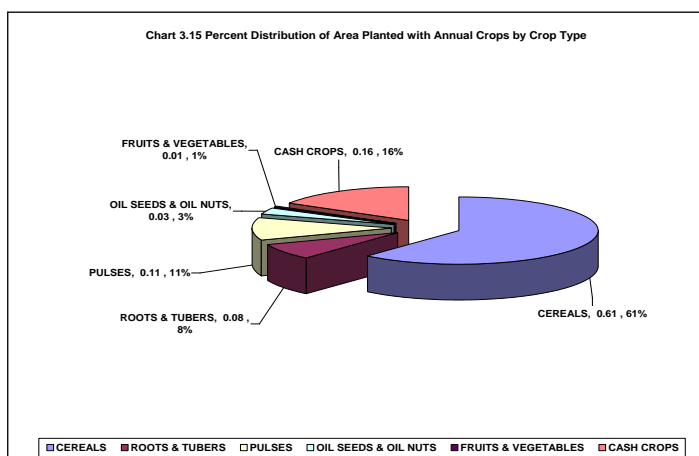
Results on crop production are presented in two different sections. The first section compares the importance of each crop regardless of whether it is annual or permanent. The second section contains a more detailed analysis of production based on crop types.

3.3.2 Crop Importance

Based on area planted, maize was the dominant crop grown in Mwanza region. The area planted with maize was 263,278 ha which accounted for 39.82% of the total area of 661,241 ha planted with annual crops in the region. Other annual crops, after maize, in order of importance based on area planted in the region were paddy (124,417 ha, 18.82%), cotton (108,328 ha, 16.38%), cassava (106,241,16%) sweet potato (50,734 ha, 7.67%), beans (31,237 ha, 4.72%), chickpeas (26,551 ha, 4.02%), groundnut (18,328 ha, 2.77%), sorghum (14,629 ha, 2.21%), green gram (9,063 ha, 1.37%), bulrush millet (4,962 ha, 0.007%). Other crops were planted to relatively small areas (Chart 3.13).



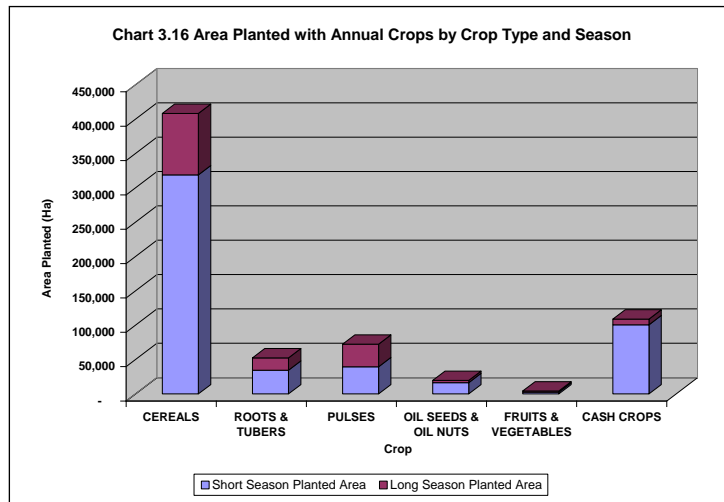
Besides, the largest planted area per household was grown with sunflower (4.06 ha). On the other hand, the smallest planted area per household was grown to cowpeas (0.14 ha) (Chart 3.14).



3.3.3 Crop Types

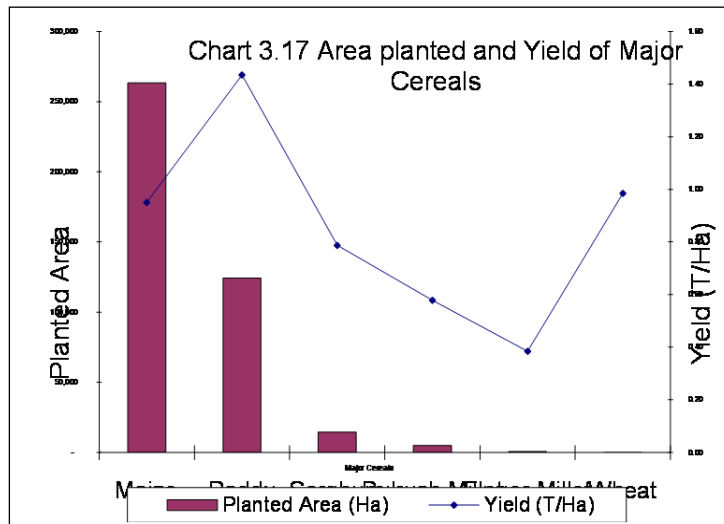
Cereals are the main crops grown in Mwanza region accounting for 61.74% (408,195 ha) of the total planted area followed by cash crops (16%), pulses (11%), roots and tubers (8%), oil seeds and oil nuts (3%) while the lowest percent of the planted area was grown with fruits and vegetables (1%) (Chart 3.15).

Generally, for all crops, the area planted during the wet season was much larger compared to the area planted in the dry season. Besides, the largest areas planted in both seasons were grown with cereals and cash crops. Also, in both seasons, the smallest area was planted with fruits and vegetables (Chart 3.16).



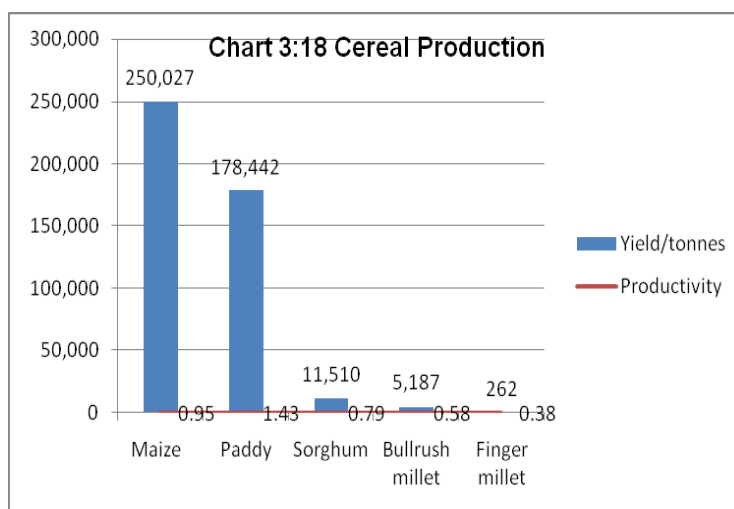
Area Planted and Productivity of Major Cereals

A total of 408,195 ha were planted with cereals out of which the largest proportion was planted with maize (263,281 ha) followed by paddy (124,417 ha), sorghum (14,629 ha), bulrush millet (5,187 ha), finger millet (679 ha), and the smallest area was planted with wheat (64 ha). On the other hand, the highest yield was obtained from paddy (1.43 ton/ha) while the finger millet recorded the lowest yield (0.38 ton/ha) (Chart 3.17).



3.3.4 Cereal Crop Production

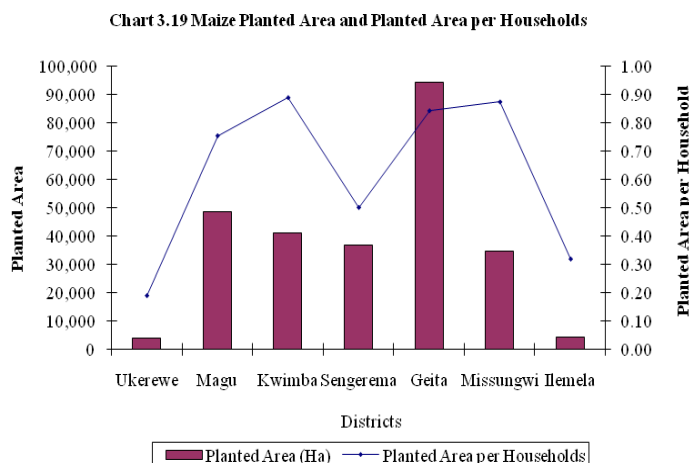
The total production of cereals was 443,276 tonnes with maize accounting for about 250,026.88 tonnes (56.40%) of the total cereal crop harvested followed by paddy 178,442.05 tonnes (40.2%), sorghum 11,510.02 tonnes, (2.5%) bulrush millet 5,187 tonnes (1.1%), and finger millet 262 tonnes (0.0%).



The highest yield was obtained from paddy (1.43 ton/ha) followed by wheat (0.98 ton/ha), maize (0.95 ton/ha), sorghum (0.79 ton/ha), bulrush millet (0.58 ton/ha), and finger millet recorded the lowest yield (0.38 ton/ha) (Chart 3.18). Geita had the largest planted area with cereals (138,300 ha) while the smallest planted area was found in Ilemela (6,155 ha). On the other hand, Kwimba recorded the highest percent of total area planted with cereals (47%). In contrast, the lowest percent was recorded in Ukerewe (20%).

3.3.4.1 Maize

Maize is the major cereal crop in Mwanza region. There were 368,417 households engaged in maize production with Geita having the largest number of households (111,885) and the smallest number of households engaged in maize production was recorded in Ilemela (13,206). The total area planted

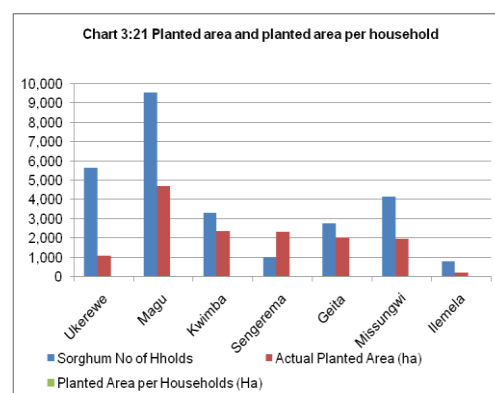
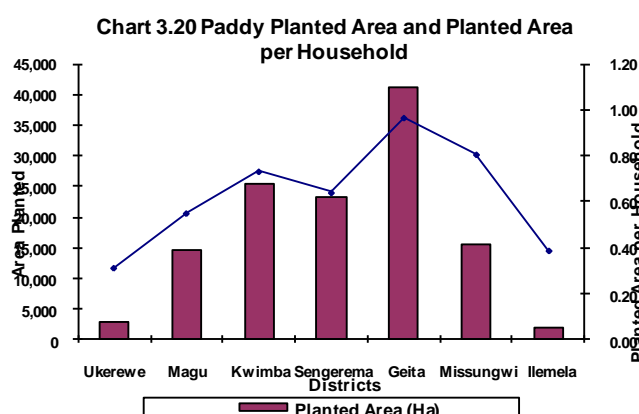


with maize was 263,281 ha. The largest area planted with maize was recorded in Geita (94,392 ha) while Ukerewe had the smallest area (3,830 ha). Furthermore, the highest yield of maize was obtained in Sengerema (1.34 ton/ha) and Missungwi recorded the lowest yield (0.74 ton/ha). The average area planted with maize per household was 0.71 ha. Kwimba had the largest planted area per maize growing household (0.89 ha) followed by Missungwi (0.87 ha), Geita (0.84 ha), Magu (0.76 ha), Sengerema (0.50 ha), Ilemela (0.32), and the smallest area was found in Ukerewe (0.19 ha) (Chart 3.19).

3.3.4.2 Paddy

On the basis of planted area, paddy was the second most important cereal crop after maize. A total of 173,421 households were engaged in paddy production. The total cultivated area was 124,417 ha. Geita had the largest area planted with paddy (41,328 ha) accounting for about 33% (33.22%) of the total area planted with paddy in the region. In contrast, Ilemela had only 1,723 ha representing only 1.38% of the total area planted with the crop. Besides, Sengerema reported the highest paddy yield (2.06 ton/ha) while Missungwi recorded the lowest yield (0.94 ton/ha).

The average area planted with paddy per household was 0.72ha. Geita had the largest planted area per paddy growing households (0.96 ha) followed by Missungwi (0.80 ha), Kwimba (0.73 ha), Sengerema (0.64 ha), Magu (0.55 ha), Ilemela (0.39 ha) while Ukerewe had the smallest area per household (0.31 ha) (Chart 3.20).



3.3.4.3 Sorghum

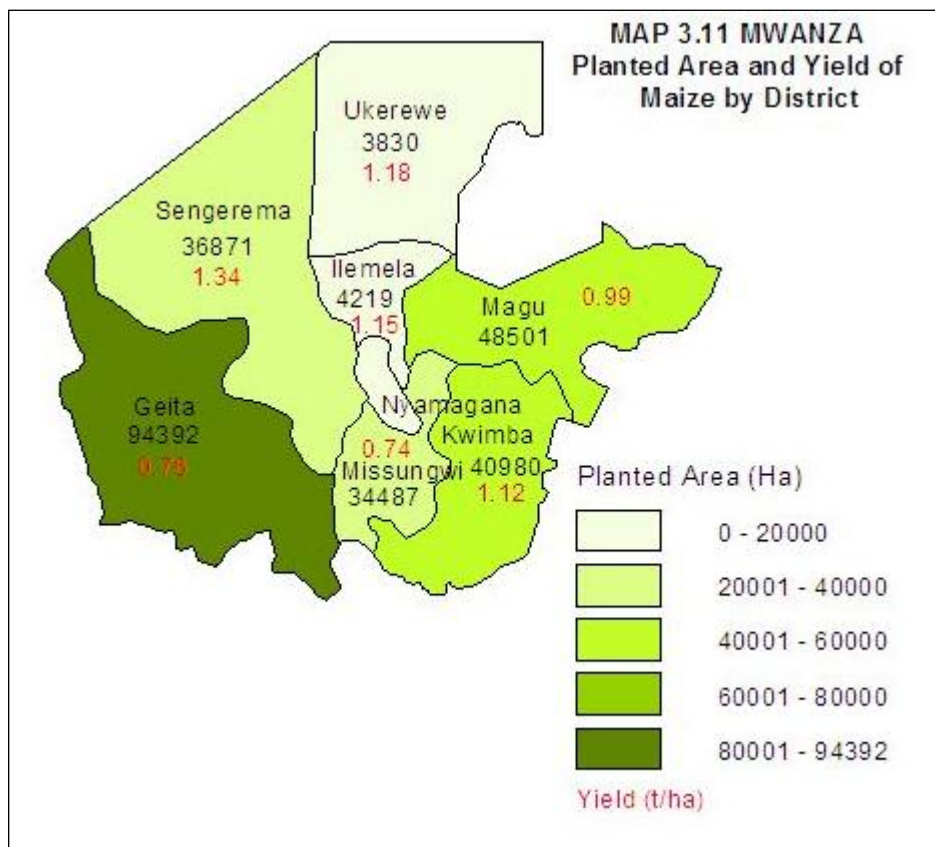
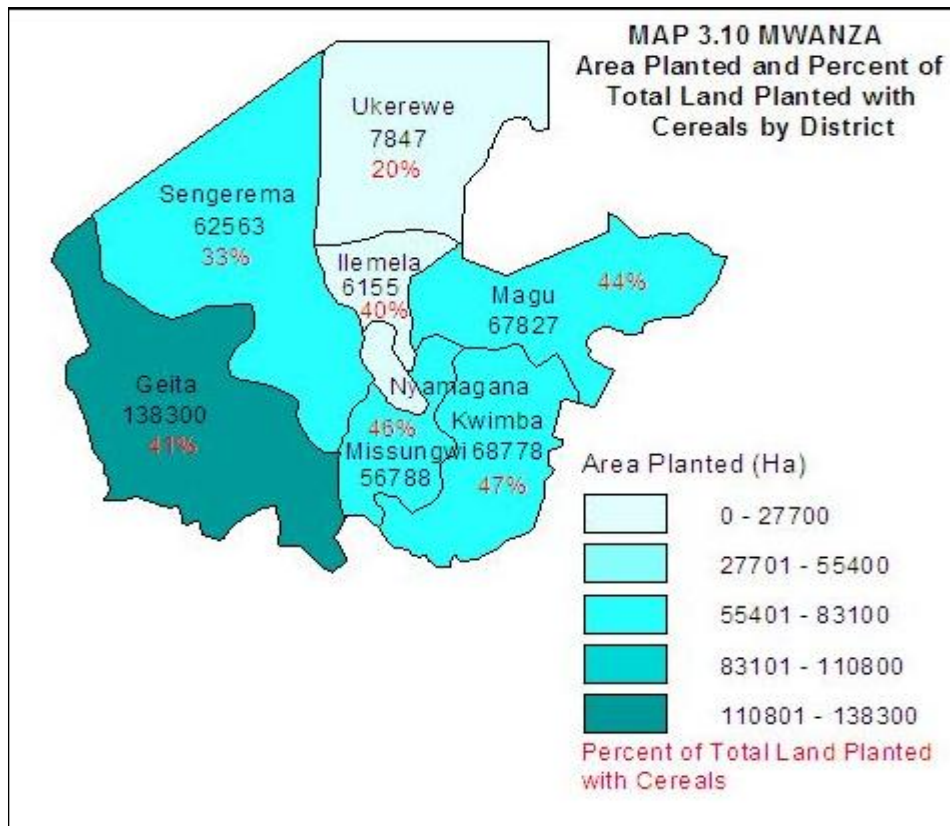
Based on planted area, sorghum was the third most important cereal crop in the region. The number of households that grew sorghum in Mwanza region during this census was 27,164 with a total of 14,630 hectares. Magu recorded the largest planted area with sorghum (4,699 ha) followed by Kwimba (2,356 ha), Sengerema (2,315 ha), Geita (2,018 ha), Missungwi (1,959 ha), Ukerewe (1,075) while the smallest area was reported in Ilemela (207). The highest yield of sorghum was reported in Sengerema (1.22 ton/ha) and lowest in Ukerewe (0.45 ton/ha) (Chart 3.21).

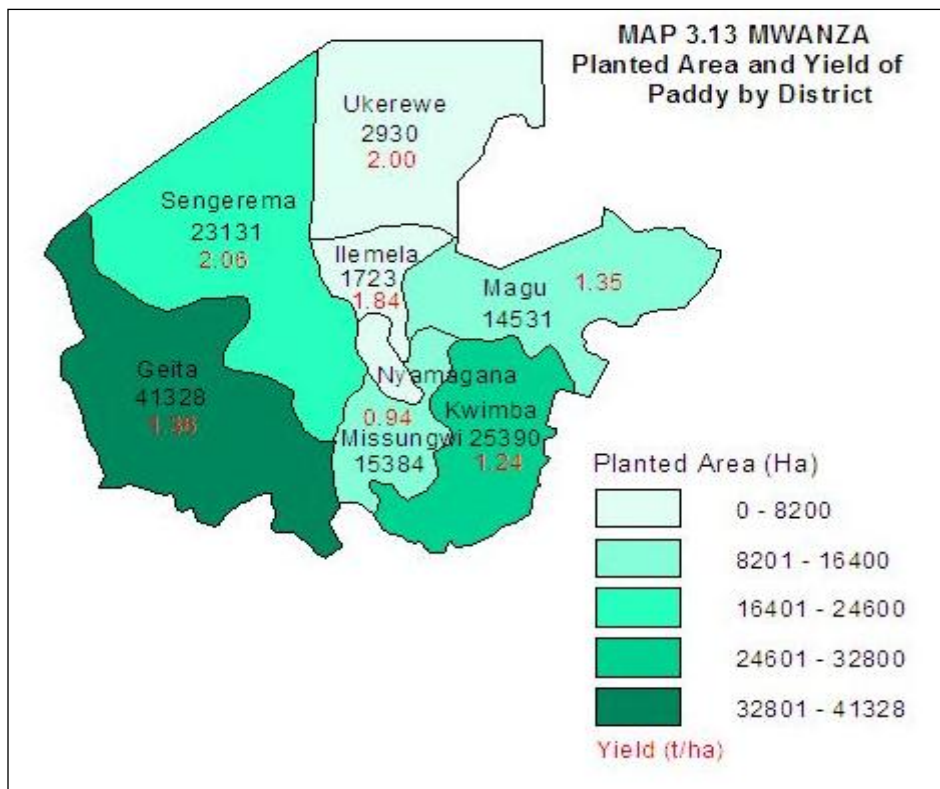
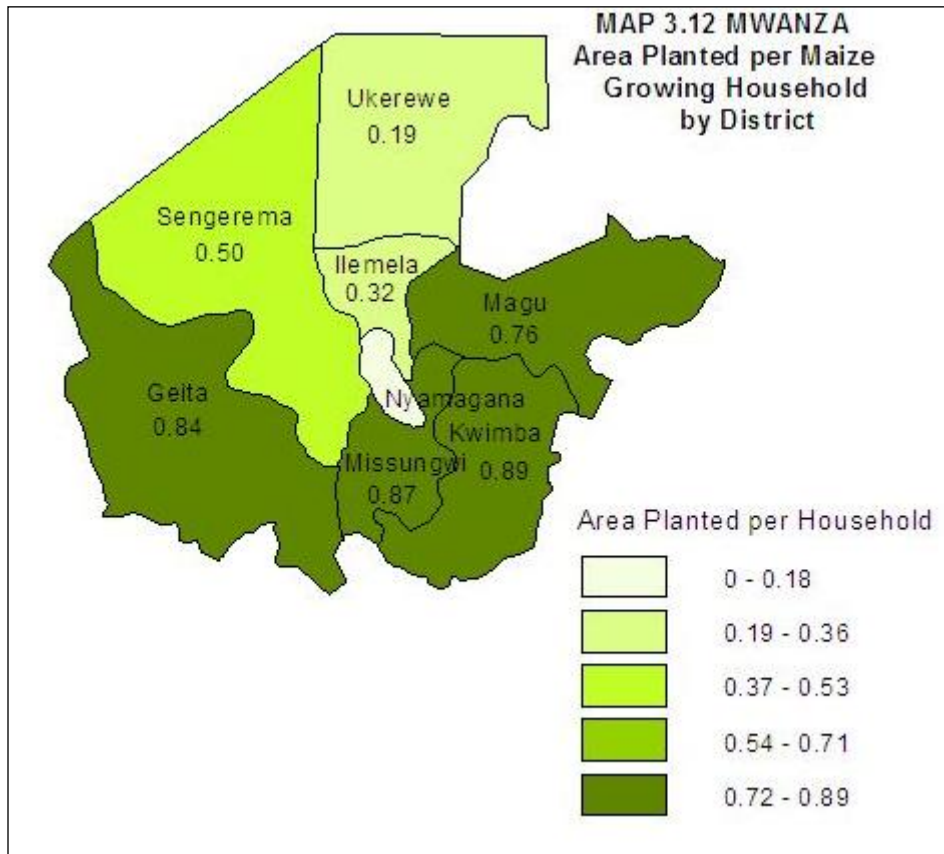
Table 3.9 Sorghum Planted Area and Planted Area per Household

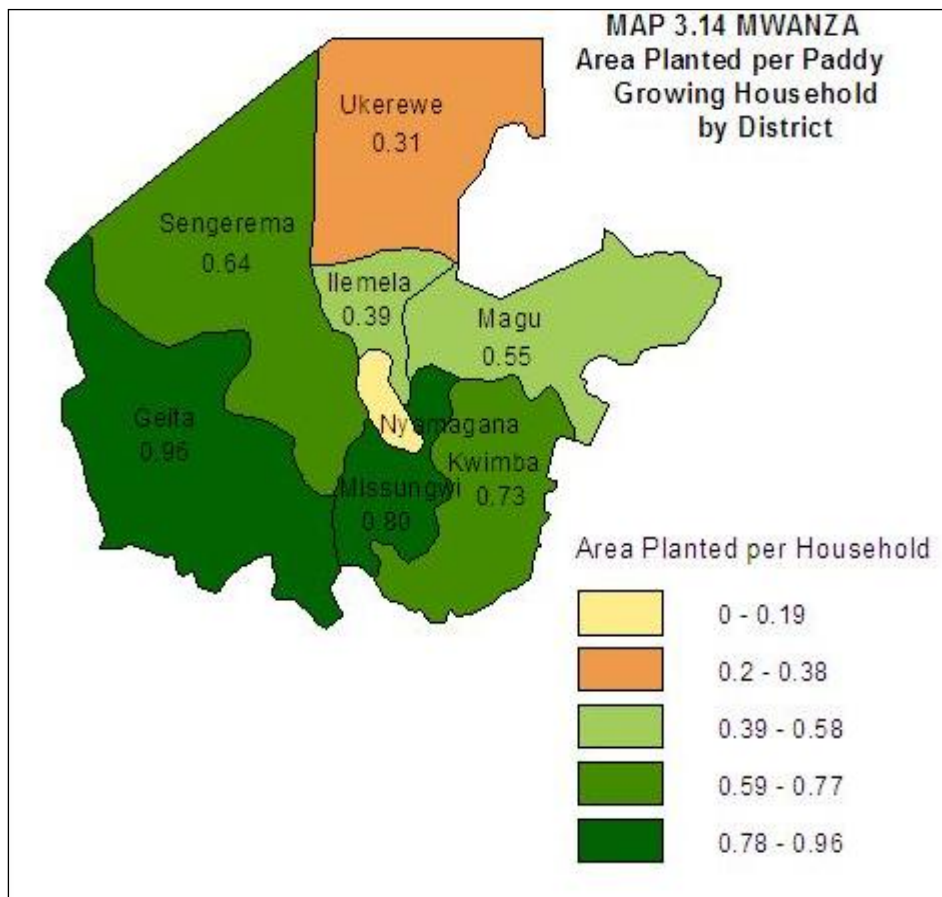
District	Sorghum		
	No of Hholds	Actual Planted Area (ha)	Planted Area per Households (Ha)
Ukerewe	5,618	1,075	0.19
Magu	9,514	4,699	0.49
Kwimba	3,325	2,356	0.71
Sengerema	1,012	2,315	2.29
Geita	2,769	2,018	0.73
Missungwi	4,129	1,959	0.47
Ilemela	796	207	0.26
Total	27,164	14,630	0.54

On the other hand, the largest planted area per household was recorded in Sengerema (2.29ha) followed by Geita (0.73 ha), Kwimba (0.71 ha), Magu (0.49 ha), Misungwi (0.47ha), Ilemela (0.26 ha) while Ukerewe had the smallest area per household (0.19 ha)

(Chart 3.21, Table 3.9).







Ukerewe (0.37), Magu (0.89), Kwimba (0.66), Sengerema (1.26), Geita (0.54), Misungwi (0.55), and Ilemela (0.47).

3.3.4.4 Other Cereals

Other cereals produced in Mwanza region included bulrush millet and finger millet. The total area planted with these crops was 5,997 ha and the total harvest was 3,616.88 tonnes.

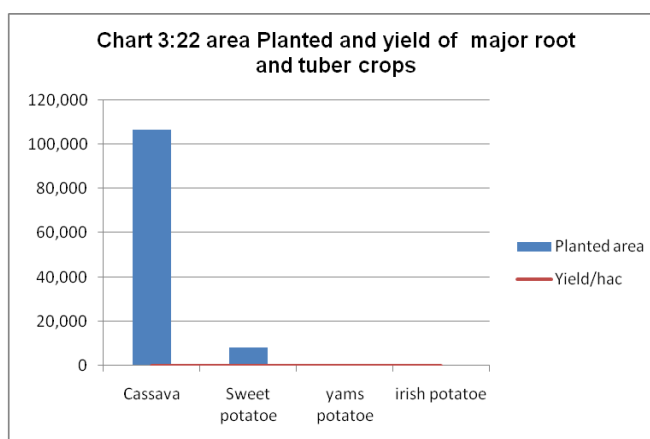
3.3.5 Root and Tuber Crops Production

The most important root and tuber crops grown in Mwanza region were cassava sweet potatoes and yams with a combined planted area of 114,497 ha. The total production of root and tuber crops was 255,677 tons and cassava alone accounting for 64% of tuber crops (164,999 tonnes). On the other hand, sweet potato production was 90,134 tons, which accounted 35% of the total root and tuber production while production of yams amounted 544 tons or only 1%.

Table 3.10: Area Planted and Yield of Major Root & Tuber Crops

Crops	Planted area	Yield/ha
Cassava	106,241	1.6
Sweet potatoes	8256	1.74
yams potatoes	250	2.4
Irish potatoes	157	1.14

Other root and tuber crops, namely Irish potatoes and coco yams contributed insignificantly to total production. Yams recorded the highest yield (2.40 tons/ha) followed by sweet potato (1.78 tons/ha), cassava (1.6 tons/ha) while Irish potatoes recorded the lowest yield (1.14tons/ha) (Table 3.10).



3.3.5.1 Cassava

Cassava was grown mostly in 4 districts, namely Geita, Ukerewe, Sengerema and Kwimba. Most households involved in cassava production were found in Geita (59,266) while the smallest number was recorded in Kwimba (4,860). Geita had the largest area planted with cassava (35,911ha) while Kwimba had the smallest area (3,216ha). Regarding yields, Ukerewe and Magu had the highest yield (2tons/ha) and Geita recorded the lowest (1.1tons/ha) (Table 3.11, Chart 3.23).

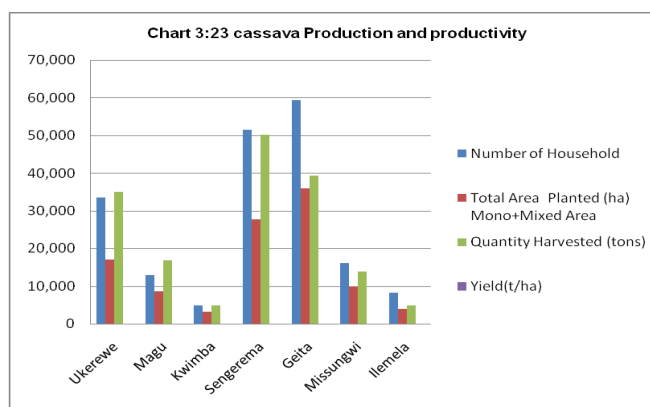


Table 3.11: Production of Cassava by District for the agriculture year 2007/08

Season				
District	Number of Household	Total Area Planted (ha) Mono+Mixed Area	Quantity Harvested (tons)	Yield(t/ha)
Ukerewe	33,434	16,942	35,079	2.1
Magu	13,002	8,529	16,847	2
Kwimba	4,860	3,216	4,904	1.5
Sengerema	51,414	27,697	50,193	1.8
Geita	59,266	35,911	39,271	1.1
Missungwi	16,142	9,963	13,793	1.4
Ilemela	8,327	3,985	4,912	1.2
	186,445	106,241	164,999	1.6

3.3.5.2 Sweet Potatoes

The number of households growing sweet potatoes in the region was 179,181. These households planted 50,736 ha of sweet potatoes and harvested 90,134 tons. Ukerewe had the largest number of households involved in sweet potato production (34,539) while Ilemela had the smallest number of households (8,592) (Table 3.12). Kwimba had the highest percent of area planted with sweet potatoes (21%) followed by Magu (17%), Ukerewe and Geita (16%), Sengerema and Misungwi (14%) while Ilemela had the lowest percent (3%). On the other hand, the proportion of land planted with sweet potatoes varied from one district to another. It ranged from as high as 21% in Kwimba to as low as 3% in Ilemela Table 3.12, Chart 3.24).

Table 3.12: Production of Sweet Potatoes by District for the agriculture year 2007/08

Districts	HH	Ha	% Ha	tons	tons/ha
Ukerewe	34,539	8,256	16	25,873	3.13
Magu	28,859	8,398	17	13,424	1.6
Kwimba	29,799	10,494	21	13,856	1.32
Sengerema	28,339	6,995	14	16,202	2.32
Geita	24,371	8,155	16	11,455	1.4
Misungwi	24,683	6,943	14	6,265	0.9
Ilemela	8,592	1,496	3	3,059	2.05
Total	179,181	50,736	100	90,134	1.78

3.6 Pulse Crops Production

The total area planted with pulses was 72,419 ha, of which the largest area was planted with beans (31,238 ha), followed by chick peas (26,552 ha) green gram (9,062 ha), cow peas (4,540 ha), Bambara nuts (943 ha), and mung beans area (85 ha).

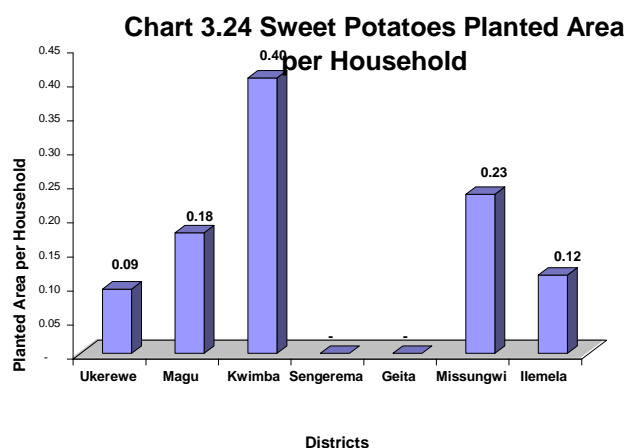


Table 3.13: Area Planted, Quantity harvested & Productivity of Pulse

CROPS	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Mung Bean	85	351	4.13
Beans	31,238	17,181	0.55
Cowpeas	4,540	2,320	0.51
Green gram	9,062	8,050	0.89
Chick peas	26,552	14,911	0.56
Bambaranuts	943	654	0.69
TOTAL	72,419	43,466	0.6

The total production of pulses was 43,466 tons of which the largest harvest was obtained from beans (17,181 tons) while the smallest was from mung beans (351 tons). However, mung beans recorded the highest yield (4 ton/ha) while the lowest yield was obtained from cow peas (0.5 ton/ha) (Table 3.13, Chart 3.25).

Beans

A total of 31,238 ha of beans were cultivated in the region. The largest planted area was found in Geita (19,987 ha). On the other hand, the smallest was reported in Kwimba (124 ha). Besides, the highest yield was recorded in Magu (1.57 ton/ha) and the lowest was reported in Ilemela (0.26 ton/ha (Table 3.14, Chart 3.26).

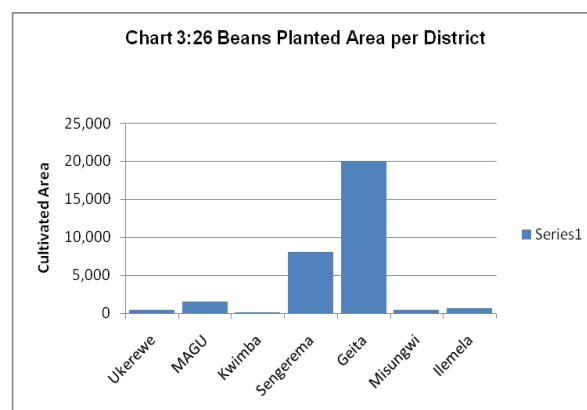


Table.3:14: Beans production, yield and productivity

District	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Ukerewe	457	188	0.41
Magu	1,480	2,318	1.57
Kwimba	124	90	0.72
Sengerema	8,086	8,475	1.05
Geita	19,987	5,618	0.28
Misungwi	463	325	0.7
Ilemela	641	168	0.26
Total	31,238	17,181	0.55

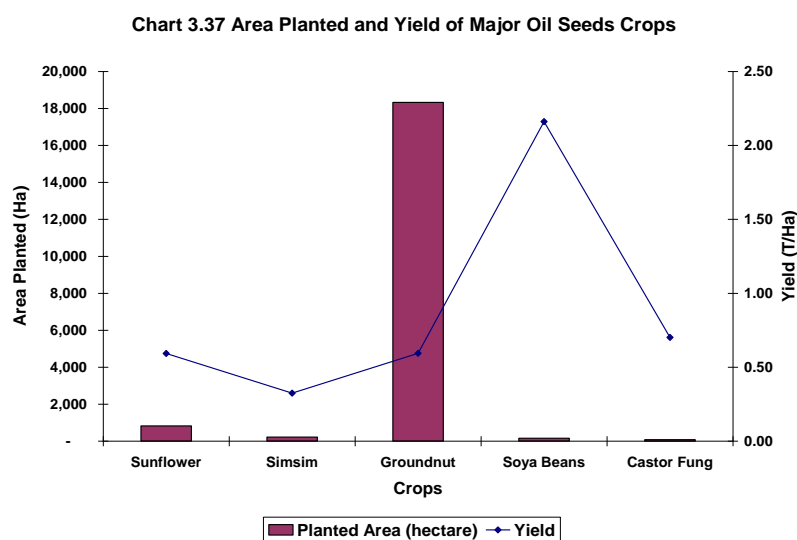
Chick Peas

The number of households growing chick peas in Mwanza region was 820 of all crop growing households in the region. The total production of chick peas in the region was 14,435 tons from a planted area of 26,552 ha resulting, hence the yield was 0.5 ton/ha. The largest area planted with

chick peas in the region was found in Kwimba (20,763.0 ha), followed by Misungwi with 17 259.7078 ha, and the smallest area was reported in Ukerewe where only seven (7) hectares were grown.

3.3.7 Oil Seed Production

The total number of households involved in oil seed production was 58,209. Most of these households planted groundnuts (55,848). Also, these households cultivated a total of 19,599 ha of which the largest area was planted with groundnuts (20,701.4 ha) followed by sunflower (820 ha), simsim (219 ha), soya beans (155 ha) while the smallest area was planted with castor fungi (77 ha).



The total production from oilseed crops was 11,831 ton with the largest quantities obtained from groundnut (10,883 tons) followed by sunflower (486 tons) and soya beans (335 tons). Harvests from other oil seed crops were not significant. On the other hand, castor fung recorded the lowest harvest (54 tons). Soya beans recorded the highest yield (2.16 ton/ha) followed by castor fung

(0.70 ton/ha), sunflower and groundnut (0.59 ton/ha), and simsim (0.32 ton/ha) (Chart 3.27).

Groundnuts

Generally, the area planted with groundnuts decreased from 29,300ha in 2000/01 to 19,000ha in 2002/03 then in 2007/08 again decreased to 18,328ha. On the other hand, Geita had the largest area planted with groundnuts (9378 ha, 45.6%) while Ukerewe had the smallest planted area (9 ha, 0.04%).

A total 55,849 households cultivated 82,328 ha of groundnuts. The highest percent of households growing groundnuts were reported in (51.2 %) and Kwimba (22.5 %). Other districts each had less than 22.5% of area planted with groundnuts. The lowest percent was recorded in Ukerewe 0.05 %.

3.3.8 Fruits and Vegetables

Various vegetables and fruits were produced, largely for the market and not household consumption. A total of 24,809 households were involved in production of different types of vegetables. The largest number of households planted tomatoes (11,329) followed by okra (1,388), onion (1,654), amaranths (2,480), and cabbage (1,906), spinach (1,895), and Chilies (1,892). Other vegetable crops were grown by a relatively small number of households. (Table 3.15, Chart 3.28)

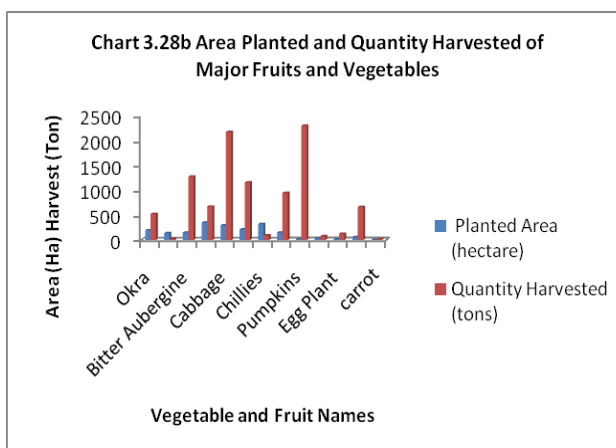


Table 3.15: Area, Production and Yield of Fruits and Vegetables

Crop	Number of Household	Planted Area (hectare)	Quantity Harvested (tons)	Yield (T/Ha)
Okra	1,388	197	525	2.7
Turmeric	94	138	23	0.2
Bitter Auvergne	1,099	152	1,276	8.4
Onion	1,654	354	672	1.9
Cabbage	1,906	298	2,174	7.3
Tomatoes	11,329	2,235	23,647	10.6
Spinach	1,895	213	1,158	5.4
Chillies	1,892	322	94	0.3
Amaranths	2,480	149	947	6.3
Pumpkins	251	17	2,300	137.2
Cucumber	305	33	79	2.4
Egg Plant	92	19	124	6.7
Water Mellon	370	59	667	11.3
Carrot	53	5	16	2.964
TOTAL	24,809	4,189	33,702	8

Geita had the highest percent of area planted with fruit and vegetable (44.2%) followed by Sengerema (17.02%), Magu (16.9%), Missungwi (11.8%), Ukerewe (1.2%) while Kwimba had the lowest percent (0.5). On the other hand, the largest planted area per fruit and vegetable growing household was recorded in Ilemela (1.1 ha) followed by Kwimba (0.3 ha). Magu, Sengerema, Geita, and Missungwi each has 0.2 ha while Ukerewe had the smallest area (0.1 ha) (Table 3.16, Chart 3.29).

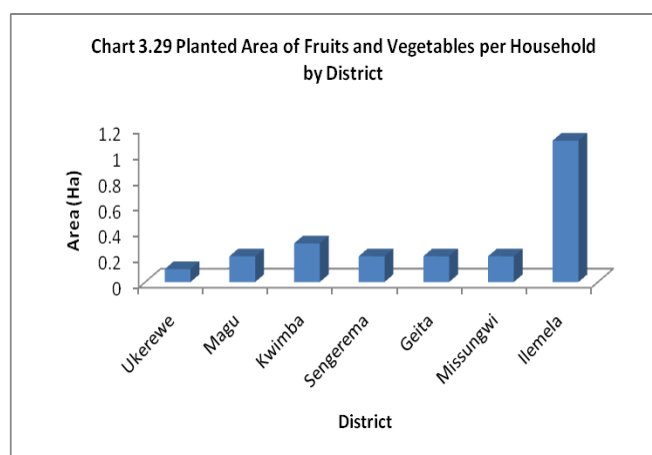
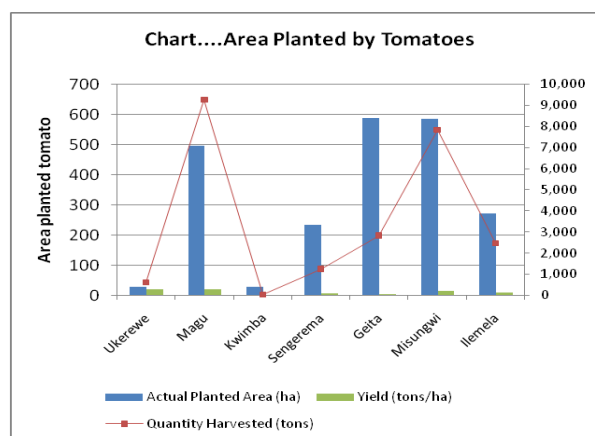


Table 3.16: Number of Households, Area Planted, and Quantity Harvested of Fruits & Vegetables by District

District	Number of Households	Area Planted (Ha)	Quantity Harvested (T)	Percent Fruits & Vegetables Planted Area	Proportion of Land Planted with Fruits & Vegetables	Planted Area per Household
Ukerewe	1,658	105	896	1.2	0.42	0.1
Magu	6,184	1,016	12,594	16.9	4.05	0.2
Kwimba	639	210	396	0.5	0.84	0.3
Sengerema	1,417	320	12,785	17.2	1.28	0.2
Geita	4,154	925	32,880	44.2	3.69	0.2
Missungwi	5,443	892	8,788	11.8	3.56	0.2
Ilemela	5,569	6,050	6,050	8.1	24.14	1.1
Total	25,064	9518	74389	100	37.97	0.4

3.3.8.1 Tomato

A total of 2,235 ha of tomatoes were cultivated by 11,329 households in Mwanza region. Data for tomato production were recorded for all districts. Geita had the largest area planted with tomatoes (589 ha) while the smallest area was recorded in both Kwimba and Ukerewe (28 ha). Besides, Geita had the highest percent area planted with tomatoes (26.4%) followed by Misungwi (26.2%), Magu (22.3%), Sengerema (10.5%), and the lowest percent was recorded by both Ukerewe and Kwimba (1.3%). In addition, Ukerewe recorded the highest yield (20 ton/ha) while the lowest yield of tomatoes was obtained in Kwimba (0.80 ton/ha) (Chart 3.30).



Cabbage

Production of cabbage was limited to some districts in the region including Ilemela (100 ha), Geita (28 ha), and Misungwi (9 ha). No cabbage production was reported in Kwimba and Sengerema. The total number of households involved in cabbage production was 94 and cultivated only 208 ha from which 2,174 tonnes were harvested.

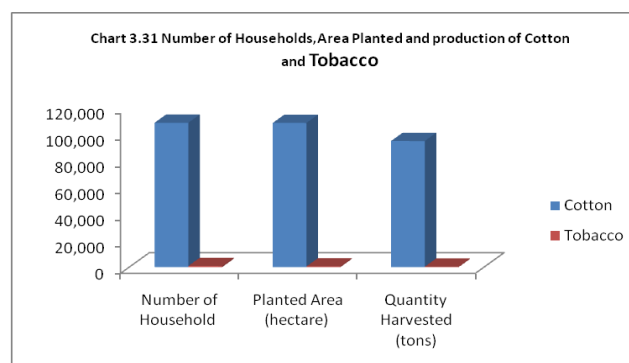
3.3.9 Other Annual Crops

Cotton & Tobacco

A total of 109,274 households planted 108,918 ha of cotton and tobacco. The total harvest obtained from the two crops was 95,098 tons with an average yield of 0.87 ton/ha. Cotton outperformed tobacco in terms of number of households, planted area, and quantity harvested (Table 3.17, Chart 3.31).

Table 3.17 Area, production and Yield of Annual crops

Crop	Number of Household	Planted Area (hectare)	Quantity Harvested (tons)	Yield
Cotton	108,405	108,329	94,725	0.87
Tobacco	869	589	372	0.63
Total	109,274	108,918	95,098	0.87

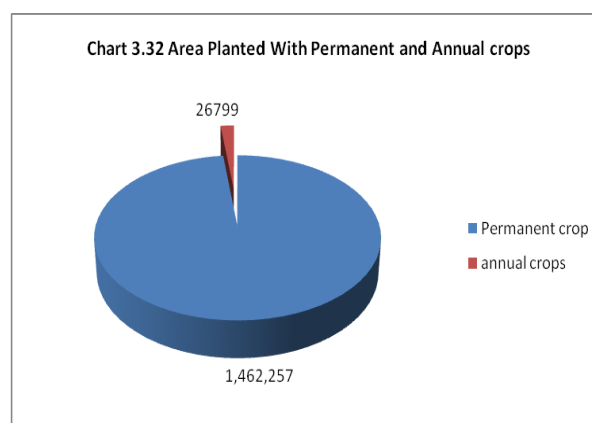


3.4 Permanent Crops

Permanent crops also referred to as perennial crops are crops that normally take over a year to mature and once mature can be harvested for a number of years. For most crops, it is easy to determine if they are annual or permanent. However, for crops like cassava and bananas the distinction is not so clear. This is because cassava has varieties that mature within a year and produce only one harvest, whilst other varieties survive for more than one year and produces several harvests. In this census, cassava was treated as an annual crop. Conversely, bananas normally take less than a year to mature, survive for more than one year and are thus treated as a permanent crop. In this report, the agriculture census results are presented for the most important permanent crops in terms of area planted, production, and yield.

Area under Annual and Permanent Crops

Permanent crops covered a total of 1,462,257 ha or 98% of the area planted with crops while annual crops were cultivated in an area of 26,799 ha (2%) (Chart 3.32). The total area with plants/trees/bushes in mono crop (ha) was 54,544 ha out of which Geita had the largest area (21,821 ha) and the smallest was found in Ilemela (940 ha). The area covered by permanent crops in mixed crop was 66,041 ha and Geita had the largest area (19,554 ha) while the smallest area was reported in Kwimba (351 ha). Besides, the area under temporary mono crops was 410,253 ha with the



largest and smallest area respectively recorded in Geita (124,162 ha) and Ilemela (4,102 ha). Furthermore, the area planted with temporary mono crops was 410,253 ha. Geita had the largest area (91,629 ha) while Ukerewe had the smallest area under this category (4,440 ha) (Table 3.18).

Table 3.18 Total Area under Annual and Permanent Crops

District	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Area under Temporary Mono Crops	Area under Temporary Mixed Crops
	Number of household	Area	Number of household	Area	Number of household	Area			
Ukerewe	7,553	3,600	30,302	17,151	35,092	20,751	12,180	7,465	4,440
Magu	10,465	7,285	3,488	3,204	13,478	10,490	8,726	78,966	41,995
Kwimba	4,348	2,845	639	351	4,988	3,196	2,550	87,749	28,672
Sengerema	19,837	14,023	37,043	15,191	53,438	29,213	25,848	57,370	47,408
Geita	26,310	21,821	50,404	19,554	72,559	41,374	33,975	124,162	91,629
Missungwi	7,039	4,030	13,045	6,989	18,582	11,019	8,235	50,440	32,159
Ilemela	2,599	940	6,789	3,602	9,175	4,542	2,246	4,102	6,775
Total	78,150	54,544	141,710	66,041	207,313	120,585	93,760	410,253	253,078

The largest harvested area was planted with other crops (91,286 ha) followed by sugar cane (858 ha), banana (581 ha), orange (264 ha). The harvested area for other crops was not significant. Regarding harvested quantities, the largest quantities were obtained from other crops (173,450 tons) while the smallest quantities were obtained from pigeon peas (1061 tons). In terms yields, oranges recorded the highest yield (78.26 ton/ha) while pigeon peas had the lowest yield (0.10 ton/ha) (Table 3.19).

Table 3.19 Area Planted with Main Perennial Crops

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (tones)	Yield (tons/Ha)
Cashew nut	53	10	0	27	26.5	26,518
Banana	28,216	3,629	746	11,736	11,736.40	15.73
Coffee	645	23	4	99	98.8	24.71
Mango	41,459	5,890	581	37,804	37,804.10	65.07
Pigeon pea	53	10	10	1	1.1	0.11
Coconut	276	6	0	170	170.4	
Orange	22,904	2,037	264	20,656	20,655.70	78.24
Sugar cane	4,253	989	858	6,871	6,870.80	8.01
Palm oil	2,413	48	11	61	60.9	5.53
Other	221,759	107,942	91,286	173,450	173,450.20	1.9
Total	322,032	120,585	93,760	250,875	250,874.80	2.68

The total planted area with permanent crops was 120,585 ha of which the largest area was planted with other crops (107,942 ha) followed by mango (5,890 ha), banana (3,629 ha), oranges (2,037 ha), and sugar cane (989 ha). Other crops were grown to area that were much smaller with coconut grown to the smallest area (6 ha) (Table 3.20, Chart 3.33). Geita recorded the highest percent of total planted area with perennial crops (34.31%) followed by Sengerema (24.23%), and Ukerewe (17.21%) while Kwimba had the lowest percent (2.65%). Moreover, Magu recorded the largest planted area per household (0.78ha) and Ilemela had the smallest planted area per permanent crop growing households (0.50 ha) (Table 3.20, Chart 3.34a).

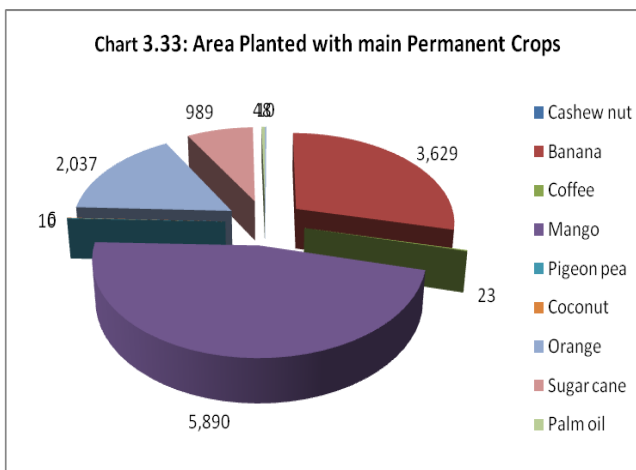
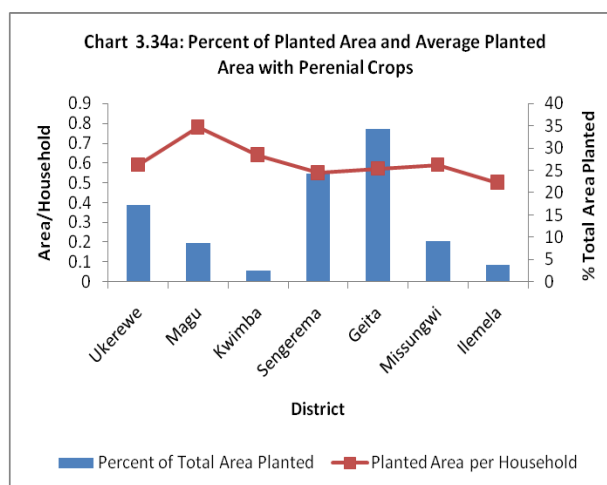


Table 3.20 Percent of Area Planted and Average Planted Area with Perennial Crops

District	Number of household	Area Planted	Percent of Total Area Planted	Planted Area per Household
Ukerewe	35,092	20,751	17.21	0.59
Magu	13,478	10,490	8.7	0.78
Kwimba	4,988	3,196	2.65	0.64
Sengerema	53,438	29,213	24.23	0.55
Geita	72,559	41,374	34.31	0.57
Missungwi	18,582	11,019	9.14	0.59
Ilemela	9,175	4,542	3.77	0.5
Total	207,313	120,585	100	

3.4.1 Mango

A total of 5,890 ha were planted with mangoes by 41,459 households. Geita had the largest area planted with mangoes (1,772 ha) while Kwimba had the smallest planted area (10 ha). Also, the largest planted area per mango growing households was recorded in Magu (1.42 ha) while the smallest area per mango growing households was found in Ukerewe (0.07 ha) (Table 3.21, Chart 3.34b)



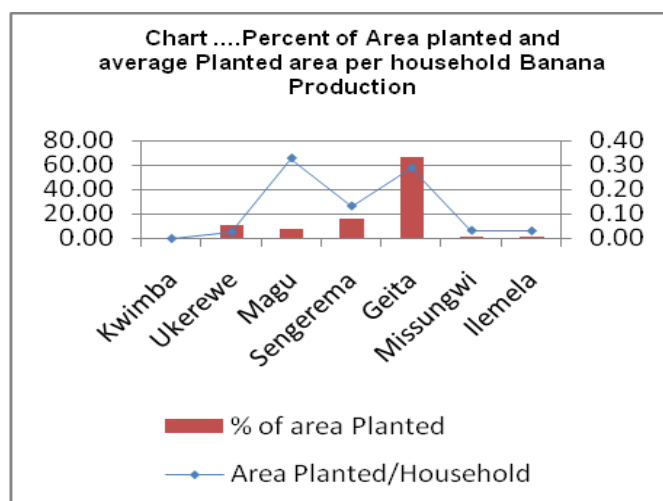
3.4.2 Banana

Except for Kwimba where none of the households reported growing banana, the crop was grown in other remaining districts. The area grown to banana varied widely between districts. However, Geita recorded the largest planted area (2,397 ha) accounting for over 50% of the planted area in the region. Missungwi (28 ha) and Ilemela (26 ha) recorded

the smallest area planted with banana (Chart 3.35). Yield data indicate that Ilemela recorded the highest yield of banana (14 ton/ha) while Magu had the lowest yield (0.10 ton/ha). Besides, Magu had the largest planted area per banana growing households (0.33 ha) while the smallest area planted with banana per banana growing area was Ukerewe and Ilemela Chart Na 3.36

Table 3.21 Percent of Area Planted and Average Planted Area with Mango

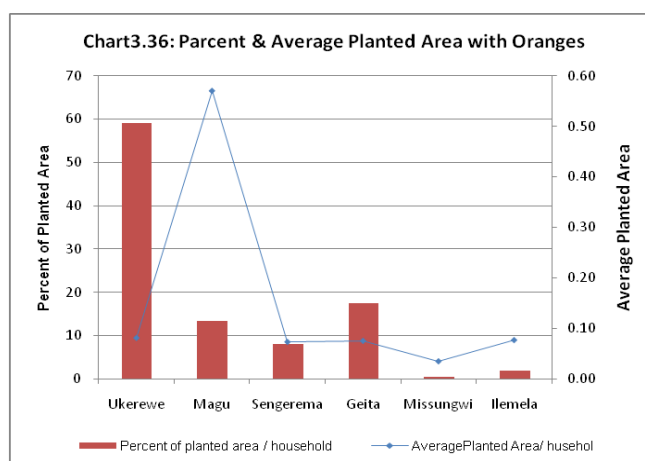
District	Number of household	Area Planted	Percent of Total Area Planted	Planted Area per Household
Ukerewe	8,750	589	10.00	0.07
Magu	951	1,353	22.97	1.42
Kwimba	384	10	0.17	0.03
Sengerema	7,489	862	14.63	0.12
Geita	16,063	1,772	30.08	0.11
Missungwi	5,913	939	15.95	0.16
Ilemela	1,909	365	6.19	0.19
Total	41,459	5,890	100.00	0.14

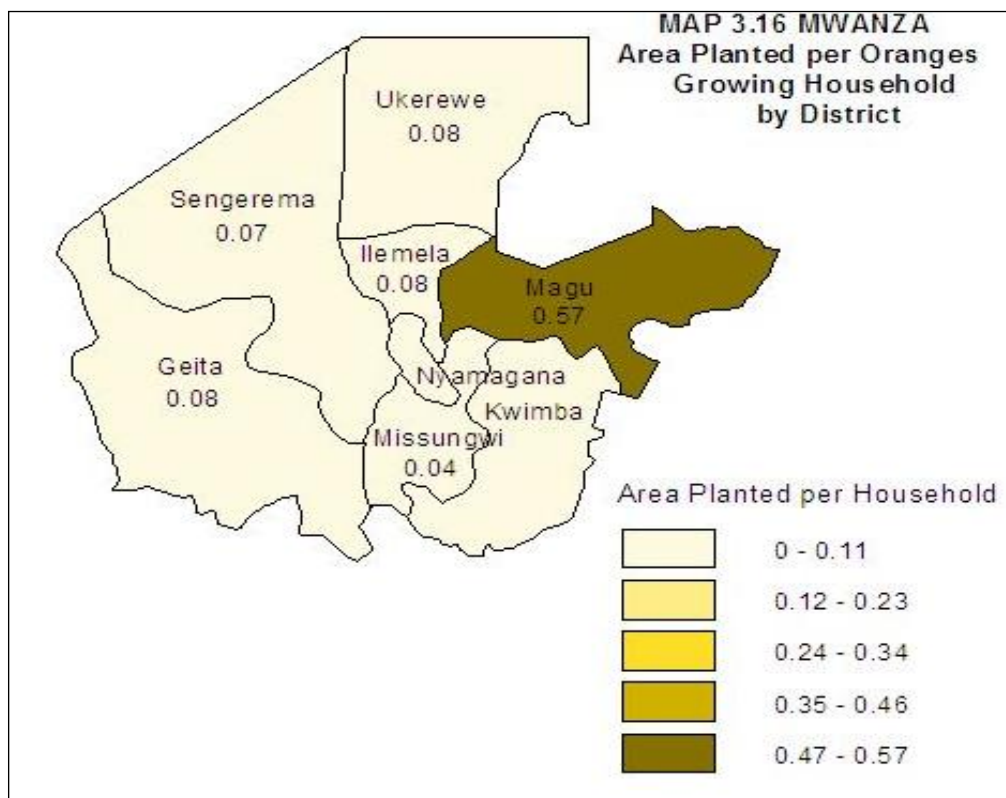
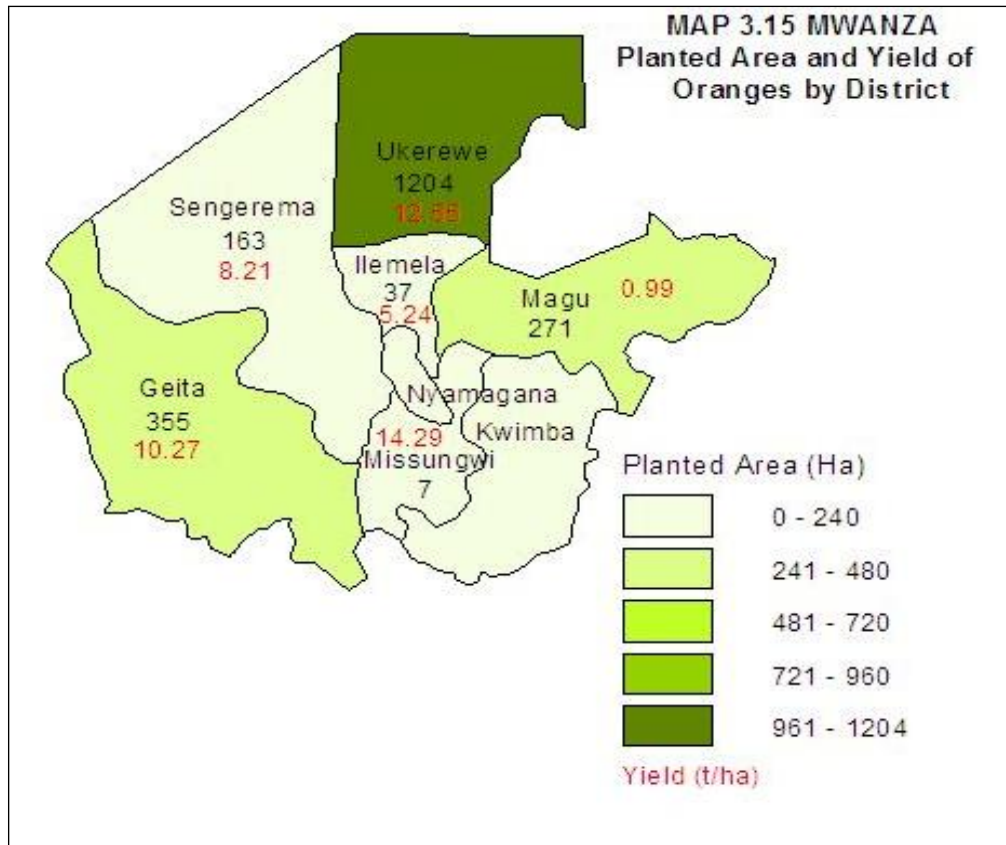


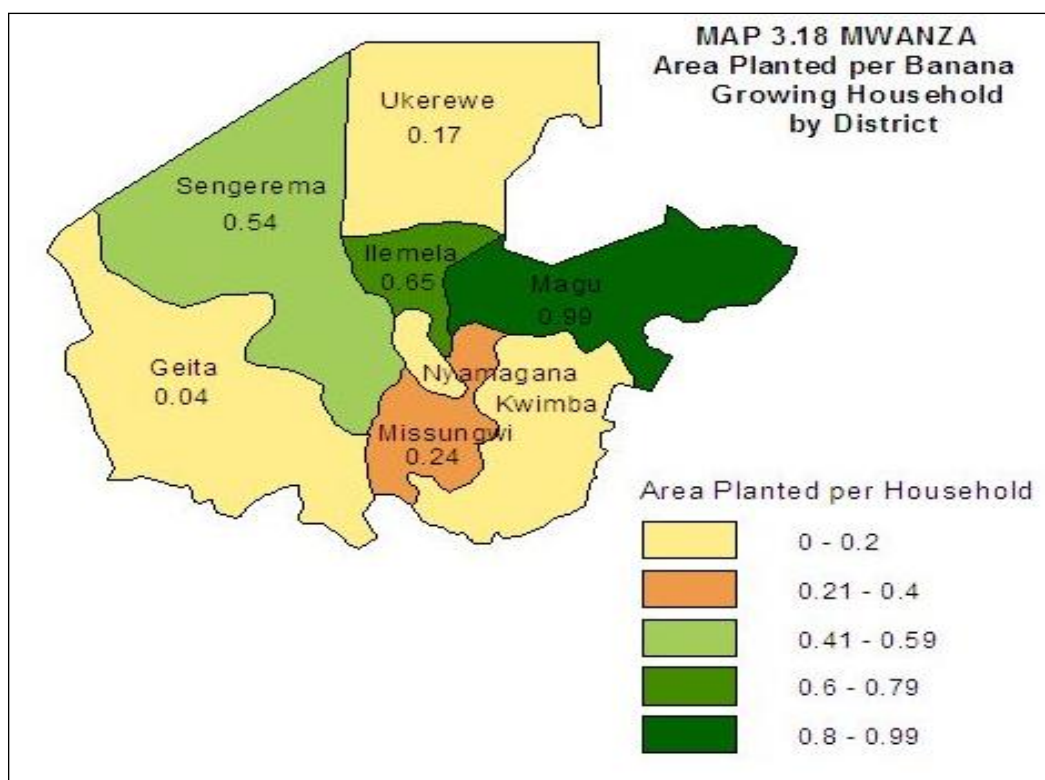
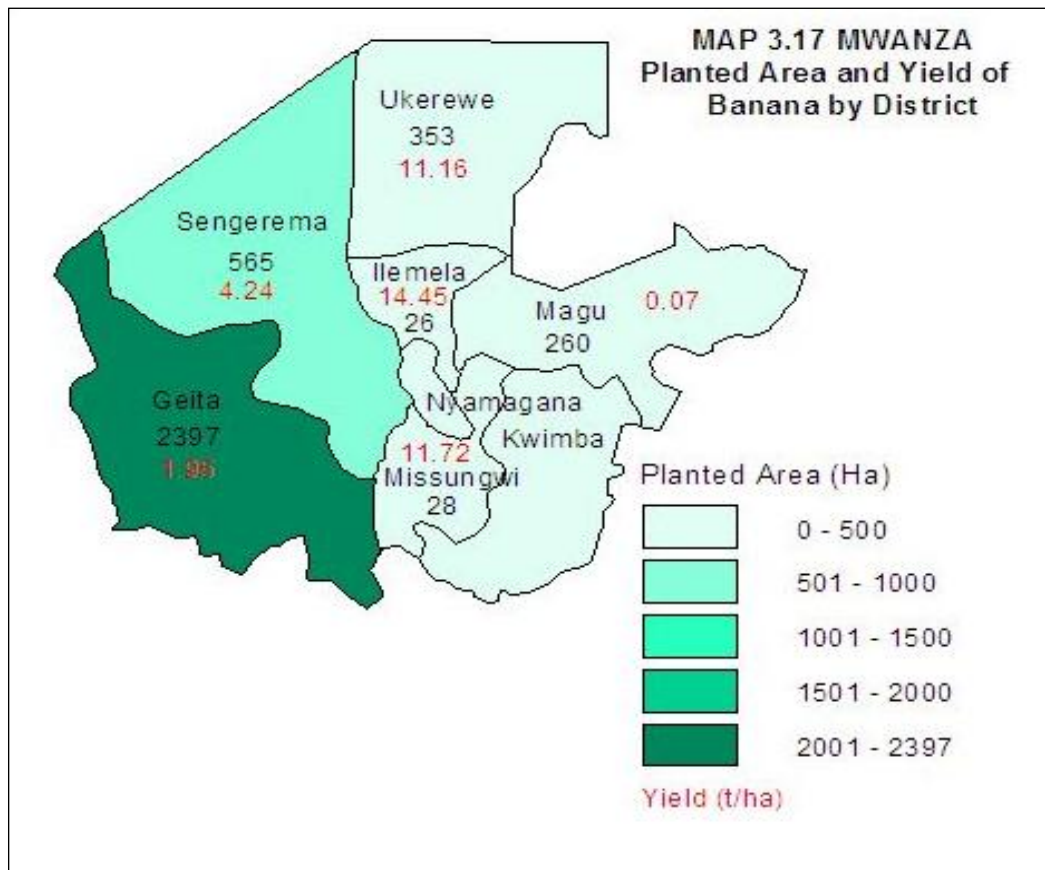
3.4.3 Oranges

Majority of households involved in orange production were recorded in Ukerewe (14,829). Similarly, Ukerewe had the highest percent of area planted with oranges (59.11%) while except for Kwimba where none of the households reported growing oranges, Missungwi had the lowest percent of area

planted with oranges (0.32%). Moreover, Magu had the largest planted area per orange growing households (0.57 ha) while Missungwi recorded the smallest area per household (0.04 ha) .







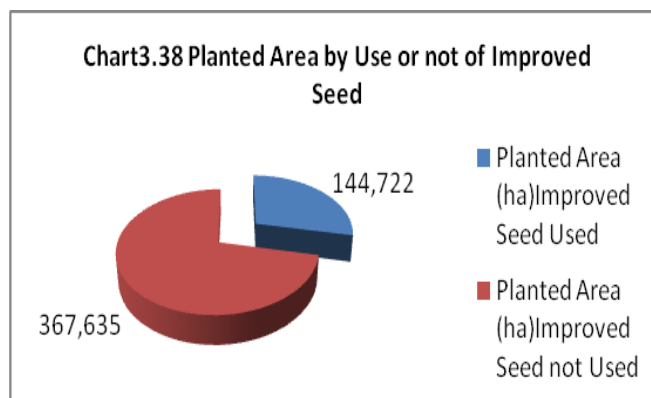
3.5.3 Use of Improved Seeds

In all districts, the area planted with improved seeds was smaller compared to the area planted without improved seeds. Only 18,231 ha (3%) were planted with improved seeds while 647,639 ha were planted without using improved seeds (Chart 3.38). Furthermore, of the 18,231 ha planted area with improved seeds, Ilemela had the highest percent of the area planted with improved seeds (44%) while Ukerewe and Kwimba had the lowest percent (1%) (Table 3.25).

Table 3.25: Number of Households Planted Area by Use of Improved Seed and District

District	Improved Seed						% of area planted using improved seed
	Number of Households using Improved Seed	Planted Area (ha) Improved Seed Used	Number of Households NOT using Improved Seeds	Planted Area (ha) Improved Seed not Used	Total Number of Households Planting in VULI	Total Planted Area (ha) in VULI	
Ukerewe	5,250	740	25,881	11,260	29,473	12,000	6.2
Magu	43,130	39,327	16,650	52,176	51,534	91,503	43
Kwimba	22,765	17,127	24,811	59,872	43,739	76,999	22.2
Sengerema	42,305	33,707	40,484	44,413	76,717	78,120	43.1
Geita	45,972	40,202	67,574	149,534	106,623	189,736	21.2
Missungwi	17,550	11,601	18,489	47,144	32,191	58,745	19.7
Ilemela	8,804	2,018	2,811	3,236	7,584	5,254	38.4
Total	185,777	144,722	196,699	367,635	347,861	512,358	28.2

Data in Table 3.25 reveals that out of a total of 347,861 households planted in Vuli and 185,777 of them used improved seeds. Moreover, 144,722 ha were planted with improved seeds out of a total of 512,358 ha planted in Vuli. Magu and Sengerema had the highest percent of area planted using improved seeds (43%) each with 33,707 ha followed by Ilemela (38.4%, 2,018 ha), Kwimba (22%, 17,127 ha). In contrast, Ukerewe had the smallest percent of planted area (6%, 740 ha) (Table 5.25).



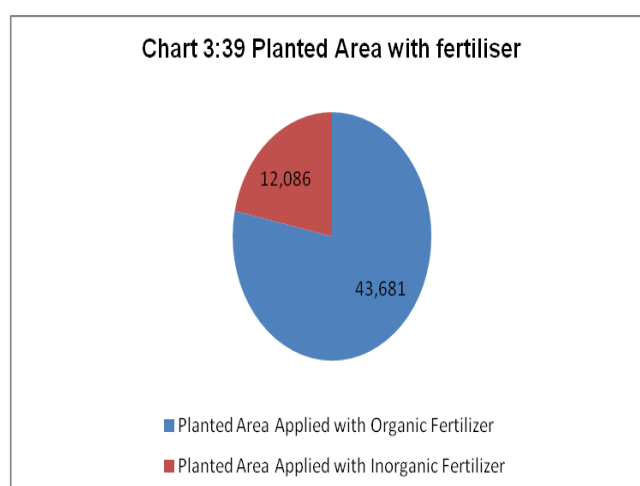
During Masika season, 32,445 households planted the total area 153,512ha out of which an area of 21,164 ha was planted using improved seeds. This was equivalent to 13.8 percent. The highest percent area planted using improved seeds was recorded in Magu (50.2%, 10,615 ha) followed by Misungwi (19.8%, 4,182 ha) while Sengerema had the lowest percent (2.2%, 463 ha) (Table 3.26).

Table 3.26: Number of Households and Planted Area by Improved Seed Use and District – Masika/ Rainy Season

District	Improved Seed						% of area planted using improved seed
	Number of Households using Improved Seed	Planted Area (ha) Improved Seed Used	Number of Households NOT using Improved Seeds	Planted Area (ha) Improved Seed not Used	Total Number of Households Planting in MASIKA	Total Planted Area (ha) in MASIKA	
Ukerewe	2,026	625	12,802	4,804	14,829	5,428	11.5
Magu	13,637	10,615	24,895	22,052	38,532	32,667	32.5
Kwimba	1,663	2,067	19,184	37,186	20,846	39,253	5.3
Sengerema	1,619	463	21,052	15,754	22,671	16,217	2.9
Geita	3,046	1,280	28,802	23,447	31,848	24,727	5.2
Missungwi	5,256	4,182	15,485	26,702	20,741	30,884	13.5
Ilemela	5,198	1,932	2,175	2,403	7,372	4,335	44.6
Total	32,445	21,164	124,395	132,348	156,839	153,512	13.8

3.5.4 Use of Fertilizers

A total of 43,681 ha were planted with organic fertilizer while the area planted with inorganic fertilizer was 12,086 ha (Chart 3.39). The area planted with organic fertilizer was much bigger in Vuli (35,894 ha) than in Masika (7,786 ha). Similarly, the area planted with inorganic fertilizer was much bigger in Vuli (4,300 ha) than in Masika (895 ha). Of all districts, Geita had the largest area planted with organic fertilizer in Vuli (10,346 ha) while in Masika the largest area was recorded in Missungwi (2,422 ha). The smallest area planted with organic fertilizer in Vuli was recorded in Ukerewe (1,253 ha) while Sengerema had the smallest area planted with organic fertilizer in Masika (307 ha). Geita had the largest area planted with inorganic fertilizer in Vuli while Ilemela recorded the smallest area (159 ha). In Masika the largest area planted with inorganic fertilizer was found in Ilemela (309 ha) while none of the households in Ukerewe reported using inorganic fertilizer (Table 3.27).

**Table 3.27: Planted Area with Fertilizer Masika and Vuli**

District	Planted Area Applied with Organic Fertilizer in Vuli	Planted Area Applied with Organic Fertilizer in Masika	Planted Area Applied with Inorganic Fertilizer in Vuli	Planted Area Applied with Inorganic Fertilizer in Masika	Planted Area Applied with Organic Fertilizer	Planted Area Applied with Inorganic Fertilizer
Ukerewe	1,253	629	9	0	1,882	639
Magu	8,579	2,231	1,091	231	10,810	3,322
Kwimba	6,671	971	197	28	7,641	1,168
Sengerema	3,588	307	943	20	3,895	1,250
Geita	10,346	336	1,100	168	10,683	1,437
Missungwi	4,021	2,422	799	138	6,443	3,222
Ilemela	1,437	889	159	309	3,446	4,026
Total	35,894	7,786	4,300	895	43,681	12,086

3.5.5 Pesticide Use

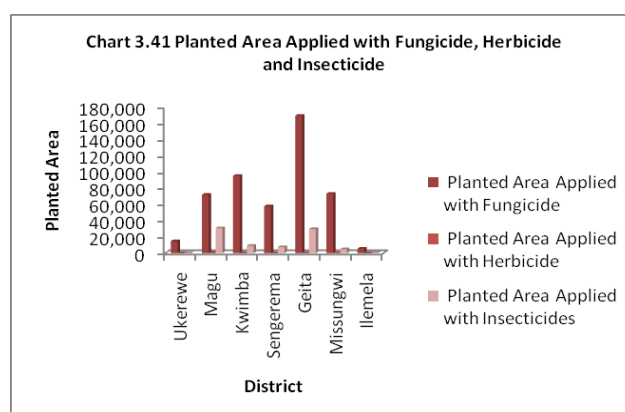
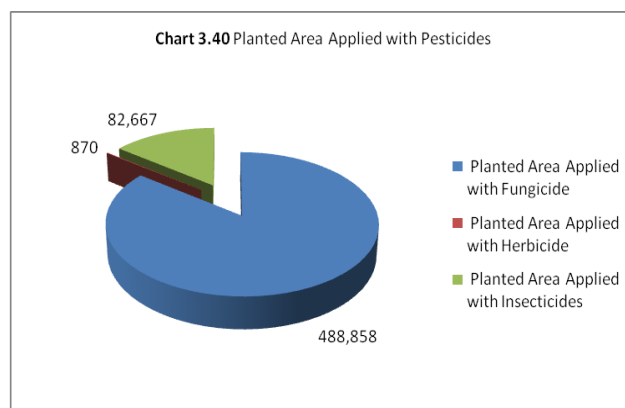
Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders for production of both annual and permanent crops in Mwanza region. Fungicides were the most common pesticide used in the region (488,858 ha) followed by insecticides (82,667 ha) while herbicides were least used (870) (Chart 3.40).

Geita had the largest planted area applied with fungicides (169,805 ha) while Ilemela had the smallest area (5,589 ha). The largest planted area applied with herbicides was found in Magu (289 ha) while none of the households in Ilemela reported using herbicides. Furthermore, Magu had the largest area planted with insecticides (30,787 ha) while Ilemela recorded the smallest area (556 ha) (Table 3.28, Chart 3.40).

Geita had the highest proportion of area planted with fungicides (883.76) followed by Sengerema (263.38), Kwimba (145.70), Magu (104.09), Missungwi (77.10), Ukerewe (16.06) while Ilemela had the lowest proportion (6.31). Regarding herbicides, Geita had the highest proportion of area applied with herbicide (1.17) followed by Sengerema (0.56), Magu (0.42), Missungwi (0.17), Ukerewe (0.04) while Ilemela had the lowest proportion. Besides, Geita had the highest proportion of the area planted with insecticides (154.97) followed by Magu (44.43), Sengerema (34.38), Kwimba (13.82), Missungwi (5.00), Ilemela (0.63) and Ukerewe recorded the lowest proportion (0.20) (Chart 3.41).

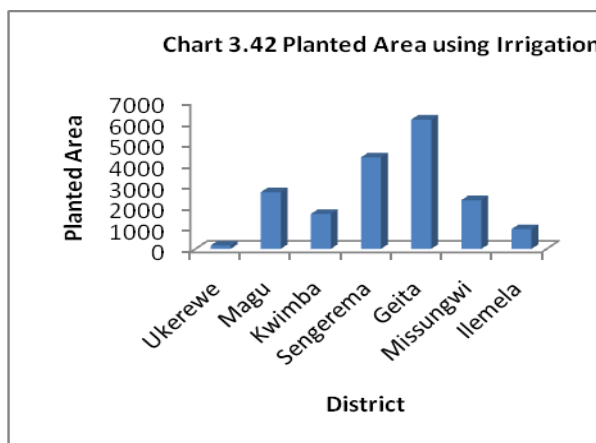
Table 3.28 Planted Area with Fungicide, Herbicide and Insecticide

District	Planted Area Applied with Fungicide	Planted Area Applied with Herbicide	Planted Area Applied with Insecticides	Total Planted Area
Ukerewe	14,616	37	185	91,021
Magu	72,133	289	30,787	69,300
Kwimba	95,540	35	9,064	65,575
Sengerema	57,781	123	7,542	21,938
Geita	169,805	224	29,775	19,214
Missungwi	73,394	161	4,760	95,190
Ilemela	5,589	0	556	88,590
Total	488,858	870	82,667	482,596



3.6 Irrigation

Water is the limiting factor to crop production in the majority of areas in Tanzania and without water most other agricultural practices applied to crops do not result in significant increases in yields. This section deals with the area under irrigation for different crops and the means by which water was extracted from the source and applied to the field.



3.6.1 Area Planted with Annual Crops and Under Irrigation

In Mwanza region, the area of annual crops under irrigation was 18,231 ha with almost a third of the area under irrigation found in Geita (6,135 ha) while the smallest area was recorded in Ukerewe (158 ha). Besides, Geita had the highest percent of area planted with irrigation (33.65%) while Ukerewe had the lowest percent (0.87%) (Table 3.29, Chart 3.42, Map 3.19).

Table 3.29: Planted Area using Irrigation by District

District	Planted Area using Irrigation	% of Planted Area using Irrigation
Ukerewe	158	0.87
Magu	2,687	14.74
Kwimba	1,659	9.1
Sengerema	4,343	23.82
Geita	6,135	33.65
Missungwi	2,311	12.68
Ilemela	937	5.14
Total	18,231	100

3.6.2 Sources of Water Used for Irrigation

There were various sources of irrigation water. The largest number of households obtained water for irrigation from rivers (5,531) followed by tap water (5,048), canals (4,853), lake (2,224), borehole (1,698), and dam (317) while none obtained water from wells (Chart 3.43). Geita had the largest number of households obtaining water from rivers (2,216), boreholes (554), and tap water (2,216). Missungwi, on the other hand, had the largest number of households obtaining water using lake (1,126) and canals (1,877) while dams were sources of water for irrigation in Magu only (Table 3.30).

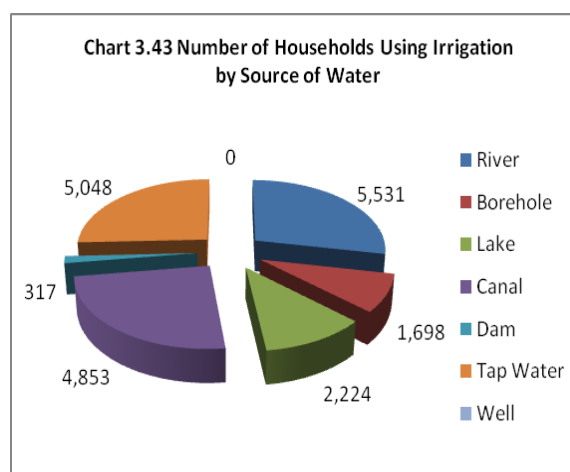
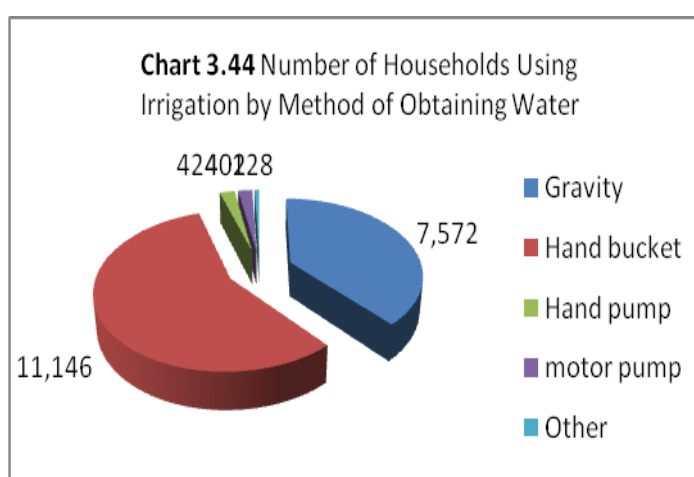


Table 3.30 Number of Households with Irrigation and Source of Water

District	Main Source of Irrigation Water							Total
	River	Borehole	Lake	Canal	Dam	Tap Water	Well	
Ukerewe	92	461	92	0	0	92	0	737
Magu	1,903	0	634	1,586	317	476	0	4,916
Kwimba	639	0	0	0	0	1,663	0	2,302
Sengerema	0	202	0	0	0	202	0	405
Geita	2,216	554	0	277	0	2,216	0	5,262
Missungwi	469	375	1,126	1,877	0	188	0	4,036
Ilemela	212	106	371	1,114	0	212	0	2,015
Total	5,531	1,698	2,224	4,853	317	5,048	0	19,672

3.6.3 Methods of Obtaining Water for Irrigation

Farming households obtained water for irrigation using various methods. The largest number of households used hand buckets to obtain water for irrigation (11,146) followed by gravity (7,572), hand pump (424), motor pump (402) and other sources (128) (Chart 3.44) Geita was the leading districts in terms of number of households using gravity



(2,769), and hand pumps (277) while Missungwi had the largest number of households using hand bucket (3,660). Furthermore, Sengerema had the largest number of households using motor pumps (202) while Kwimba was the only district where households indicated using other methods to obtain water for irrigation (128) (Table 3.31).

3.7 Crop Storage and Marketing

3.7.1 Crop Storage

Crop storage means keeping a crop for a certain period of time for various reasons including food for the household, in order to sell at higher prices or as seed for planting in the following season. Geita

recorded the largest number of households reporting storing crops (134,317) while Ilemela reported the smallest number (14,320) (Chart 3.45). However, Kwimba had the highest percent of

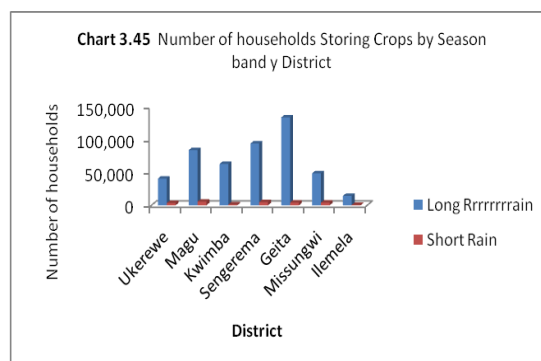
Table 3.31 Number of Households with Irrigation by Method of Obtaining Water

District	Gravity	Hand bucket	Hand pump	motor pump	Other	Total
Ukerewe	0	737	0	0	0	737
Magu	2,379	2,537	0	0	0	4,916
Kwimba	1,918	256	0	0	128	2,302
Sengerema	0	202	0	202	0	405
Geita	2,769	2,216	277	0	0	5,262
Missungwi	188	3,660	94	94	0	4,036
Ilemela	318	1,538	53	106	0	2,015
Total	7,572	11,146	424	402	128	19,672

households storing crops (98%) followed by Geita (97%), Ilemela (96%), and Sengerema (95%) while the lowest percent was recorded in both Missungwi and Ukerewe (92%) (Table 3.32).

Table 3.32: Number of households Storing Crops in Long and Short Season by District

District	SHORT & LONG SEASON				Total
	Number of households storing crops	%	Number of households not storing crops	%	
Ukerewe	40,894	92	3,408	8	44,302
Magu	84,358	94	5,708	6	90,066
Kwimba	63,179	98	1,407	2	64,585
Sengerema	94,327	95	5,060	5	99,387
Geita	134,317	97	4,154	3	138,471
Missungwi	48,802	92	4,129	8	52,932
Ilemela	14,320	96	636	4	14,956
Total	480,196	95	24,504	5	504,700



Method of Storage

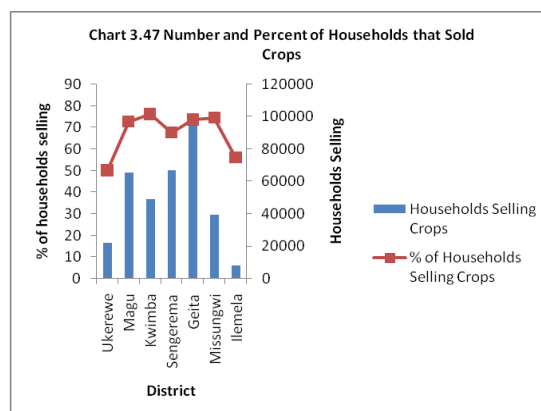
The most widely used method of storing crops was sacks/open drums followed locally made traditional structures (22%).

3.7.2 Crop Marketing

Geita had the largest number of households that sold crops (101,915). In contrast Ilemela had the smallest number of crop selling households (8,380). Kwimba recorded the highest percent of households selling crops (76.24%) followed by Missungwi (74.47%), Geita (73.60%), Magu (72.71%), Sengerema (67.62%), Ilemela (56.03%) while Ukerewe had the lowest percent (49.90%) (Chart 3.46).

Main Marketing Problems

Households pointed out various marketing problems. The most important problem was too low open market price (364,494) while others included crop market being too far (43,734), transport cost too high (22,050), lack of market information (18,550), and no transport (18,243). Other problems were mentioned by relatively small number of households (Chart 3.47, Table 3.33).



Problems	Ukerewe	Magu	Kwimba	Sengerema	Geita	Missungwi	Ilemela	Overall
Open Market Price too low	20,171	75,636	54,482	63,964	96,099	42,420	11,721	364,494
No Transport	1,197	2,537	2,046	2,429	6,370	2,816	849	18,243
Transport Cost too high	737	4,757	3,197	2,429	4,985	2,816	3,129	22,050
No buyer	368	1,586	256	405	277	375	106	3,373
Crop Market too Far	-	3,964	22,893	7,287	3,600	4,505	1,485	43,734
Farmer Association problems	-	159	256	-	-	188	212	814
Cooperative problems	-	317	384	405	-	657	636	2,399
Trade Union Problems	-	793	384	607	831	188	53	2,855
Government Regulation Problems	276	634	895	202	1,385	845	265	4,503
Lack of Market Information	553	4,123	1,023	2,631	2,769	7,133	318	18,550
No problem	5,434	22,041	21,614	22,064	47,634	7,696	212	126,694
Other	-	-	-	-	-	-	159	159
Not Applicable	54,157	88,163	63,562	88,052	144,564	77,614	21,904	538,017

3.8 Access to Crop Production Services

3.8.1 Source of Agricultural Credits

Agricultural households in Mwanza region obtained credit from various sources. The highest percent of households received credit from savings and credit societies (42.4%) followed by family/friend or relatives (40.2%), NGO/Development project (4.0) private individuals (3.6%), trader/trade store (7.2%) and cooperatives is less than (2%), and (Chart 3.47). Regarding percentage distribution of households receiving credit by main source of credit and district, family and relatives provided the main source of credit for agricultural households in Sengerema and Geita. On the other hand, cooperatives were important sources of credit in Ukerewe, Magu, and Missungwi. Traders/store were important source in Geita.

3.8.2 Crop Extension

Out of 397,781 crop growing households, 204,116 households representing 51.3% received extension advice on crop production while 48.7% (193,665 households) did not (Table 3.34, Chart 3.48). Regarding access to extension service, Ilemela had the highest percent of households receiving extension advice (85.8%) followed by Magu (81.3%), Missungwi (56.2%), Sengerema (51.9%), Kwimba (47.7%), Geita (37.3%) while Ukerewe had the lowest percent (28.5%) (Chart 3.49).

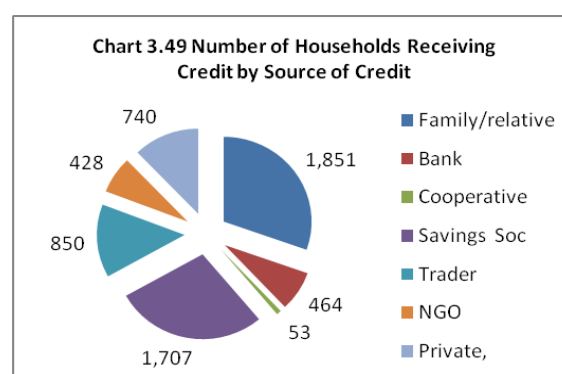
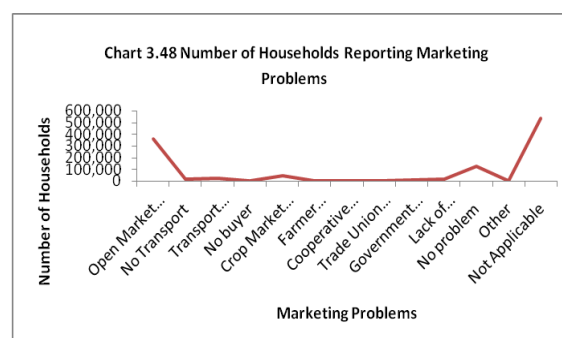


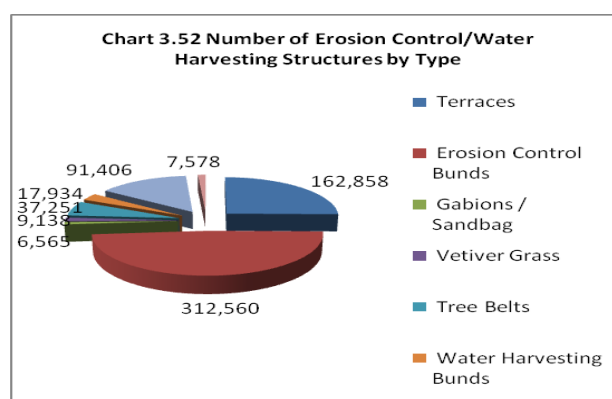
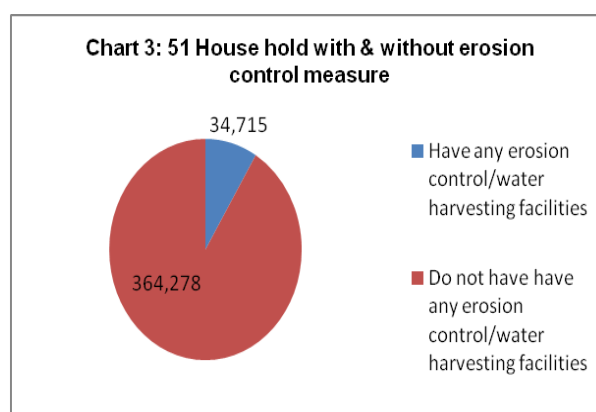
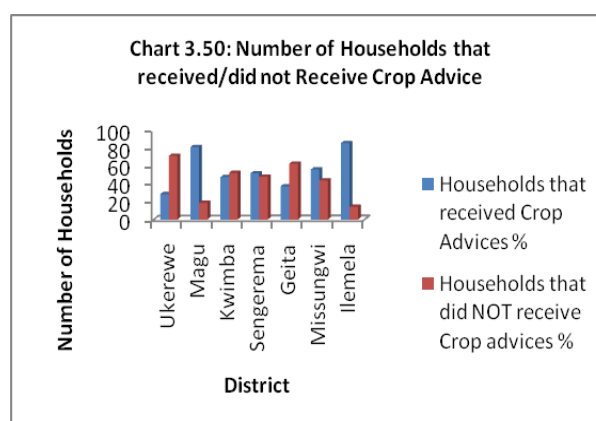
Table 3.34 : Number of Agriculture Households that received Crop Advice During the 2007/08 Agriculture Year

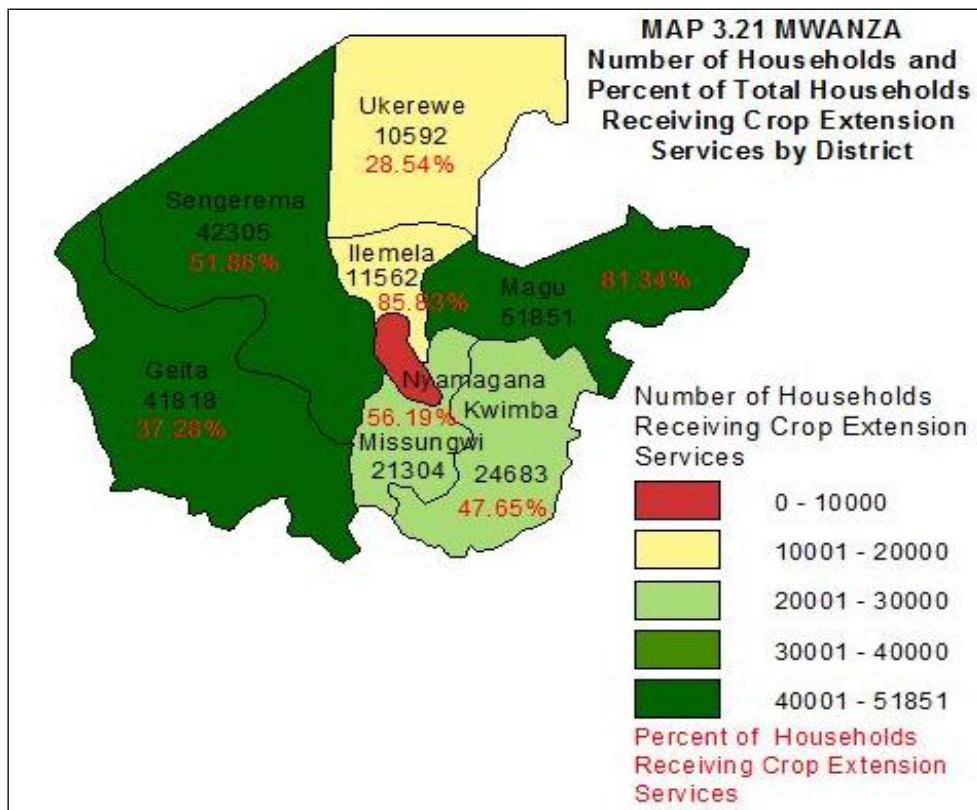
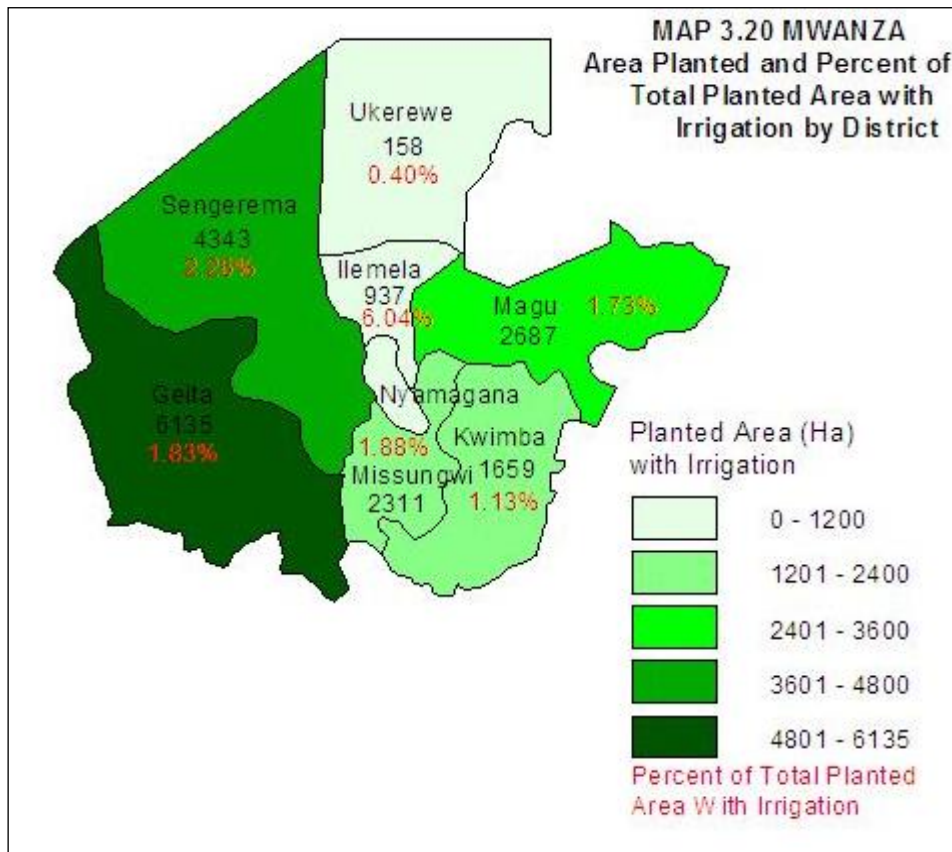
District	Households that received Crop Advices		Households that did NOT receive Crop advices		Crop Growing Households
	Number	%	Number	%	
Ukerewe	10,592	28.5	26,526	71.5	37,118
Magu	51,851	81.3	11,893	18.7	63,744
Kwimba	24,683	47.7	27,113	52.3	51,796
Sengerema	42,305	51.9	39,269	48.1	81,575
Geita	41,818	37.3	70,343	62.7	112,162
Missungwi	21,304	56.2	16,611	43.8	37,916
Ilemela	11,562	85.8	1,909	14.2	13,471
Total	204,116	51.3	193,665	48.7	397,781

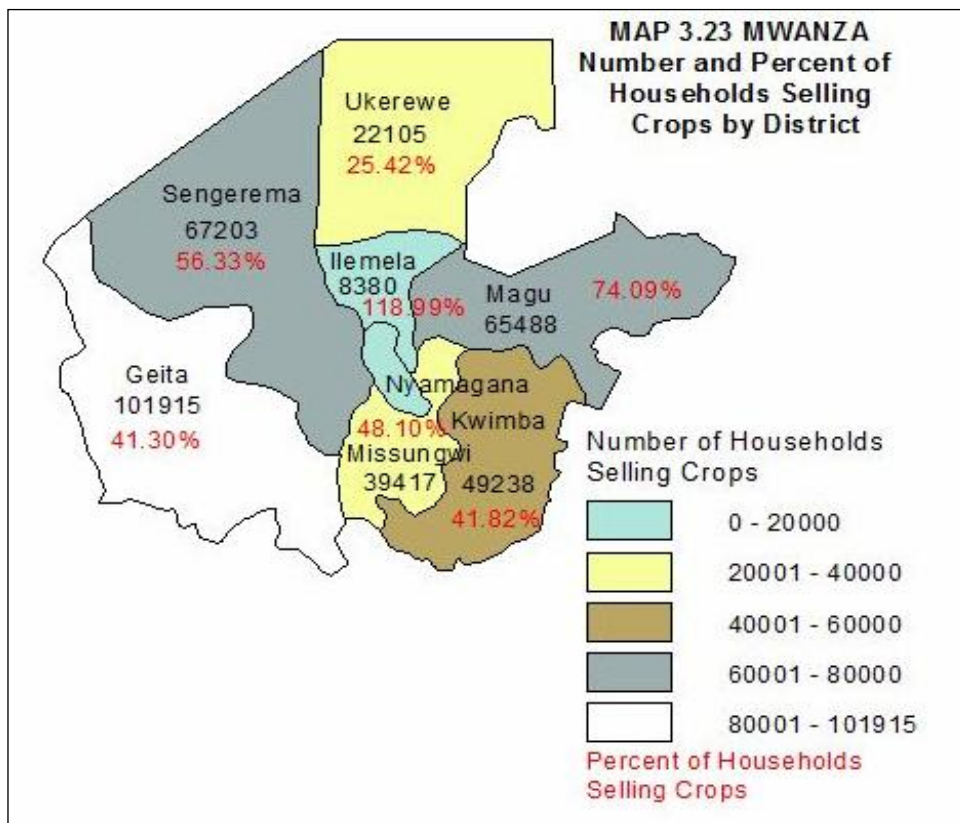
3.9 Erosion Control Facilities

Erosion control and water harvesting facilities have dual purposes of reducing erosion and increasing the amount of water available for crop production. The number of agricultural households that had soil erosion and water harvesting facilities on their farms in Mwanza region was 34,715 representing 8.7% of agricultural households while those without structures were 364,278 (91.3%) in the region (Chart 3.50).

Various types of erosion control and water harvesting structures were used in the region and varied by type and district. Most of these structures were comprised of erosion control bunds (312,560) followed by terraces (162,858), drainage ditches (91,406), tree belts (37,251), water harvesting bunds (17,934), Vetiver grass (9,138), other (7,578), and gabions/sandbag (6,565)(Chart 3.51). Magu had the highest percent of structures (26.4%) while Kwimba had the lowest percent (0.5%) (Chart 3.52).



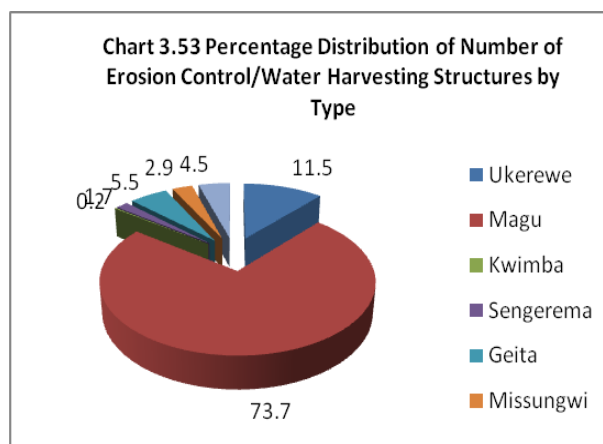




3. 10 LIVESTOCK RESULTS

3.10.1 Cattle Production

The total number of cattle in the region was 1,976,971 distributed in 220,964 households. The largest population of cattle was found in Geita (497,665) followed closely by Magu (485,056), Kwimba (368,201), Sengerema (281,969), Missungwi (250,674), Ukerewe (66,039) while Ilemela had the smallest population (27,367) (Chart 3.53, Table 3.35,



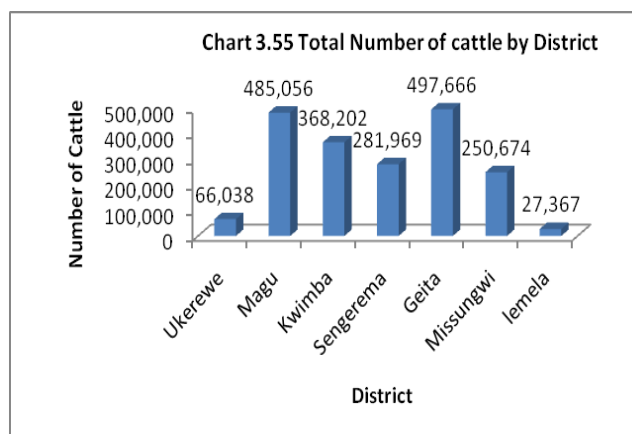
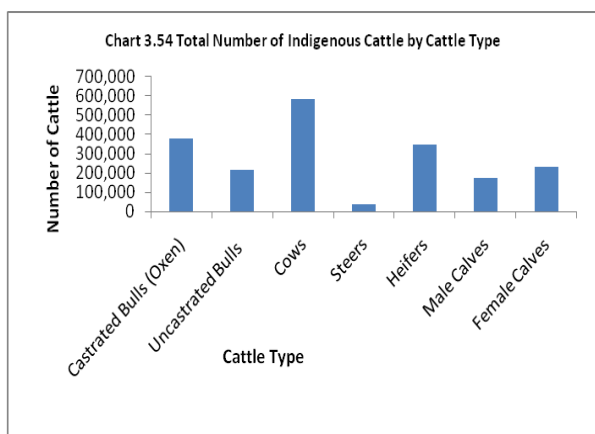
Map 3.21). Besides, While Magu had the highest density of cattle per km² of land (3,130) Sengerema had the lowest density (1,465 head per km²) (Map 3.22).

Most of the cattle in the region were of indigenous type (1,970,901). In all districts they accounted for over 97% of all cattle kept while in Sengerema they were the only type of cattle

Table 3.35 Number and Percent Distribution of Cattle, by Type & by District

District	Number of Cattle				Percentage Distribution of Cattle			
	Indigenous	Beef	Diary	Total	Indigenous	Beef	Diary	Total
Ukerewe	65,762	184	92	66,038	99.5	0.2	0.1	100
Magu	482,995	1,427	634	485,056	99.5	0.2	0.1	100
Kwimba	367,306	384	512	368,202	99.7	0.1	0.1	100
Sengerema	281,969	0	0	281,969	100	0	0	100
Geita	496,281	0	1385	497,666	99.7	0	0.2	100
Missungwi	250,017	282	375	250,674	99.7	0.1	0.1	100
Lemela	26,571	0	796	27,367	97.1	0	2.9	100
Total	1,970,901	2,277	3,794	1,976,972	99.6	0.1	0.1	100

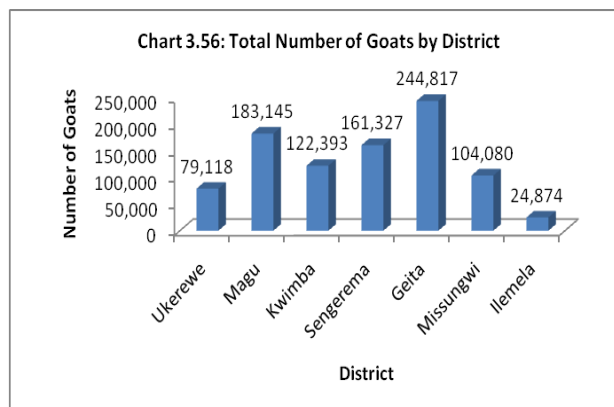
kept (100%). Beef cattle accounted for 0.12% (2,277 cattle) of the cattle population in the region with Magu having the largest number (1,427). On the other hand, improved dairy cattle represented only 0.1% of the cattle population with Geita recording the largest number of them (1,385) (Table 3.35).



3.10.2 Goat Production

3.10.2.1 Goat Population

A total of 919,755 goats were kept in 145,307 households giving an average of six goats per goat keeping households. Geita had the largest number of goats (244,817) followed by Magu (183,145), Sengerema (161,327), Kwimba (122,393), Missungwi (104,080), Ukerewe (79,118), and Ilemela had the smallest number (24,874) (Chart 3.54, Table 3.36). However Misungwi district had the highest density (122 flock per km²) while Ukerewe recorded the lowest density (34 flock per km²) (Map 3.23).

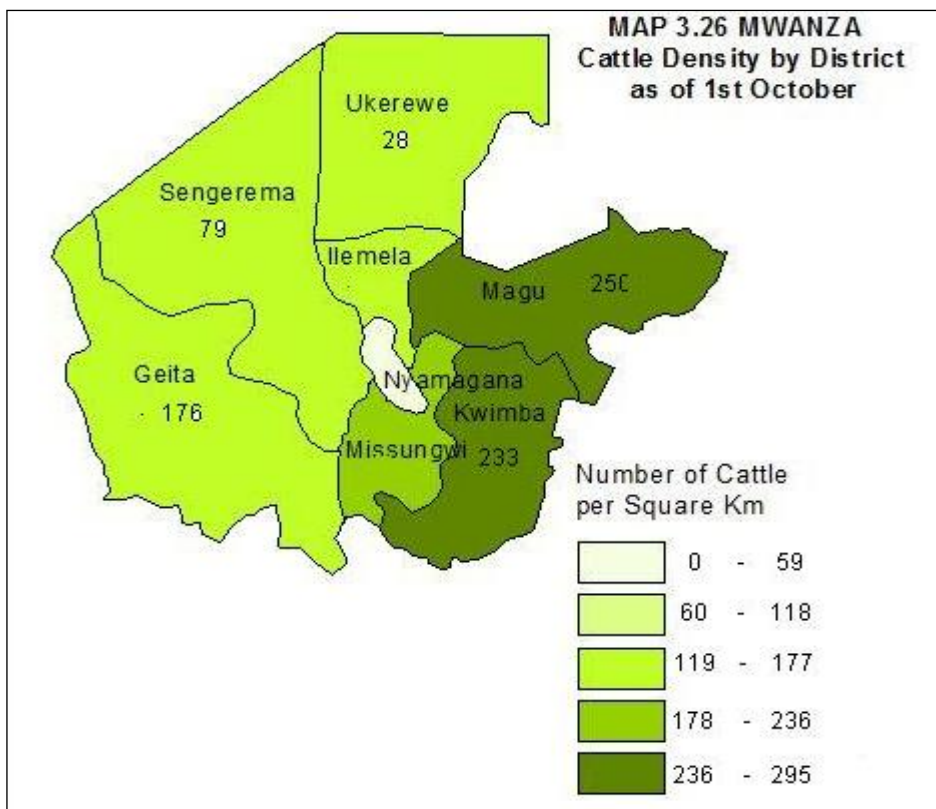
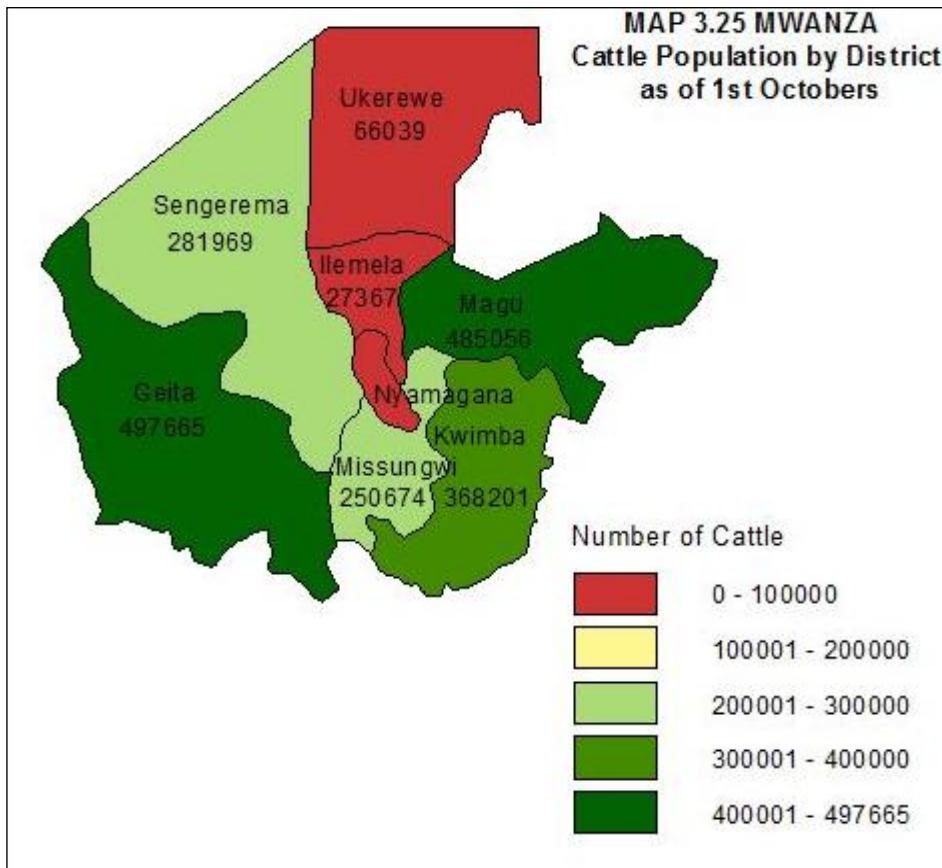


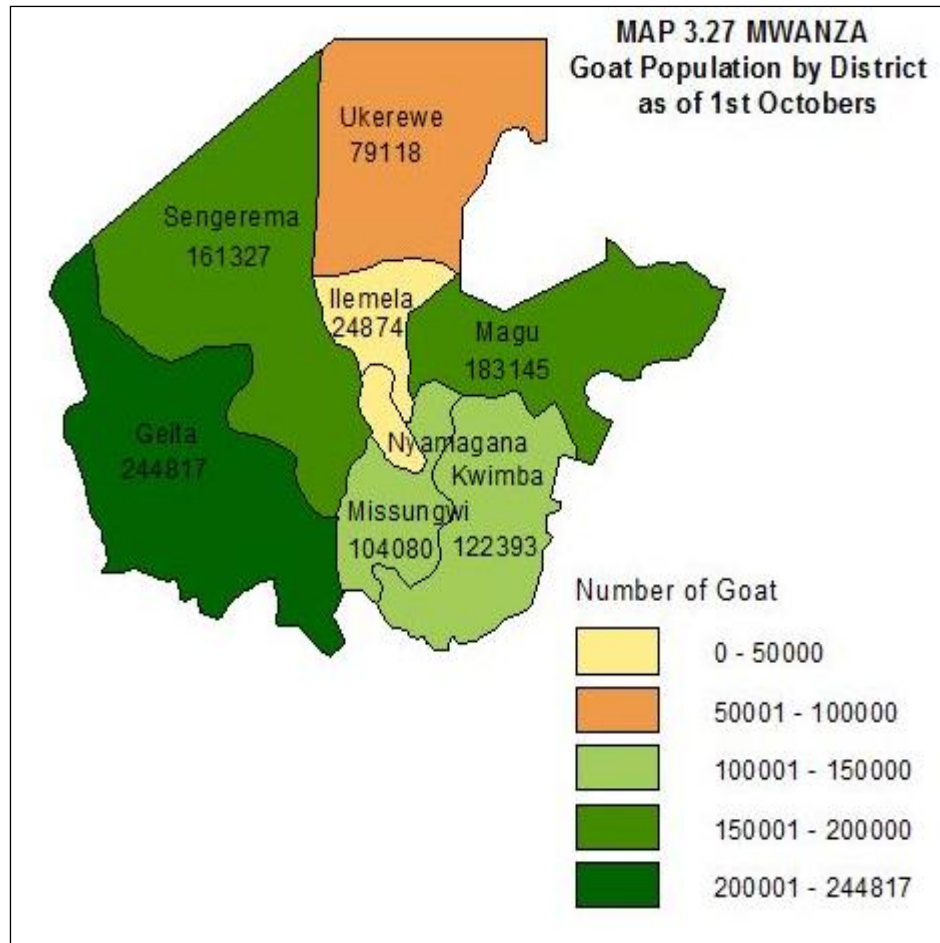
3.10.2.2 Goat Breeds

Most of the goats kept in Mwanza region were of indigenous type accounting for 98.4% (904,695) of the goat population. In actual fact, indigenous goats were the only type of goats kept in Missungwi, Ukerewe and Sengerema districts. In addition, a large number of these goats were recorded in Geita (241,771) while Ilemela recorded the smallest number of indigenous goats (23,707). An insignificant number of improved breeds of goats were raised for meat production and were only kept in Ilemela (53). Also, there were 15,005 dairy goats with about 50% of them kept in Kwimba (7,674) (Table 3.36).

Table 3.36: Number of Households, Goats and Percent Distribution by Type of Goats and by District

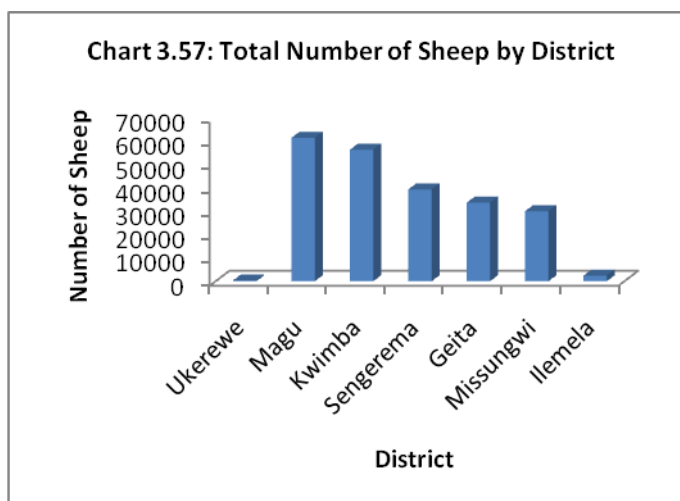
District	Indigenous			Improved for Meat			Improved Dairy			Total		
	Households	Goats	%	households	Goats	%	Households	Goats	%	households	Goats	%
Ukerewe	21,092	79,118	100	0	0	0	0	0	0	21,092	79,118	100
Magu	22,041	179,973	98.3	0	0	0	317	3,171	1.7	22,358	183,145	100
Kwimba	13,684	114,719	93.7	0	0	0	128	7,674	6.3	13,812	122,393	100
Sengerema	28,339	161,327	100	0	0	0	0	0	0	28,339	161,327	100
Geita	41,264	241,771	98.8	0	0	0	554	3,046	1.2	41,818	244,817	100
Missungwi	14,547	104,080	100	0	0	0	0	0	0	14,547	104,080	100
Ilemela	3,182	23,707	95.3	53	53	0.2	106	1,114	4.5	3,341	24,874	100
Total	144,149	904,695	98.4	53	53	0	1,105	15,005	13.7	145,307	919,753	100





3.10.3 Sheep Production

The total number of sheep in Mwanza region was 224,403. Magu had the largest number of sheep (61,683) accounting for 28% of the total population of sheep in the region. Other districts with a sizable number of sheep were Kwimba (56,528), Sengerema (39,472), Geita (33,787), and Missungwi (30,126). In contrast, Ukerewe had the smallest number of sheep (368)



(Chart 3.55, Map

3.24). Moreover,

Misungwi district had the highest density of sheep per km² (35 flock /km²) and the lowest density was recorded in

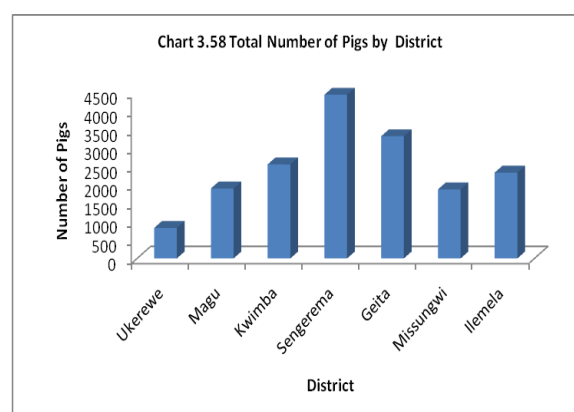
Table 3.37: Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October 2007/08 Agricultural year

District	Number of Indigenous					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Ukerewe	0	0	368	0	0	368
Magu	11,575	2,696	31,555	6,501	9,355	61,683
Kwimba	10,359	1,790	26,985	6,650	10,743	56,528
Sengerema	6,680	0	17,003	8,906	6,882	39,472
Geita	9,693	554	18,001	1,939	3,600	33,787
Missungwi	4,505	1,032	18,770	2,628	3,191	30,126
Ilemela	371	0	1,432	265	371	2,440
Total	43,183	6,072	114,115	26,890	34,143	224,403

Ukerewe (one flock/ six km²). All (224,403) sheep kept in the region were indigenous. Of these she sheep constituted the largest category of sheep (114,115) followed by ram (43,183), she lamb (34,143), male lamb (26,890), and castrated sheep numbered only 6,072. Although the population of sheep by category varied across districts, generally, Magu had the largest population of ram (11,575), castrated sheep (2,696), and she sheep (31,555). On the other hand, Sengerema had the largest number of male lamb (8,906) while Kwimba recorded the largest number of she lamb (10,743) (Table 3.37).

3.10.4 Pig Production

The total population of pigs in Mwanza region was 17,277. Sengerema had the largest number of pigs (4,453) followed by Geita (3,323), Kwimba (2,558), Ilemela (2,334), Magu (1,903), Missungwi (1,877) and Ukerewe had the smallest number

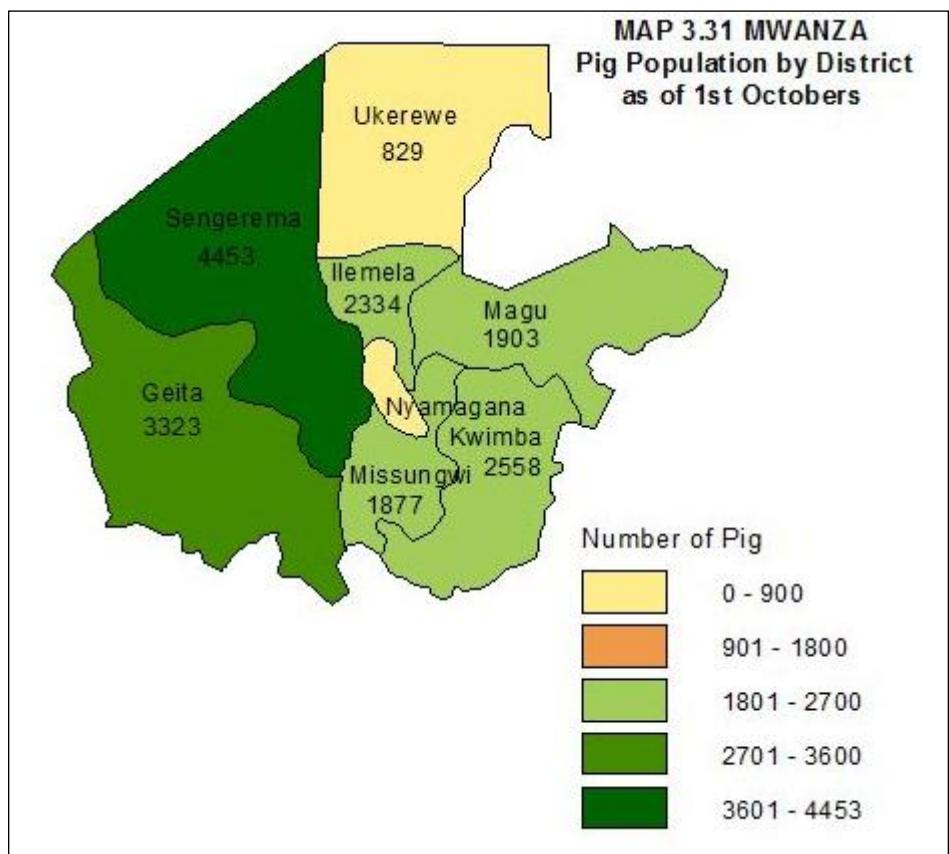
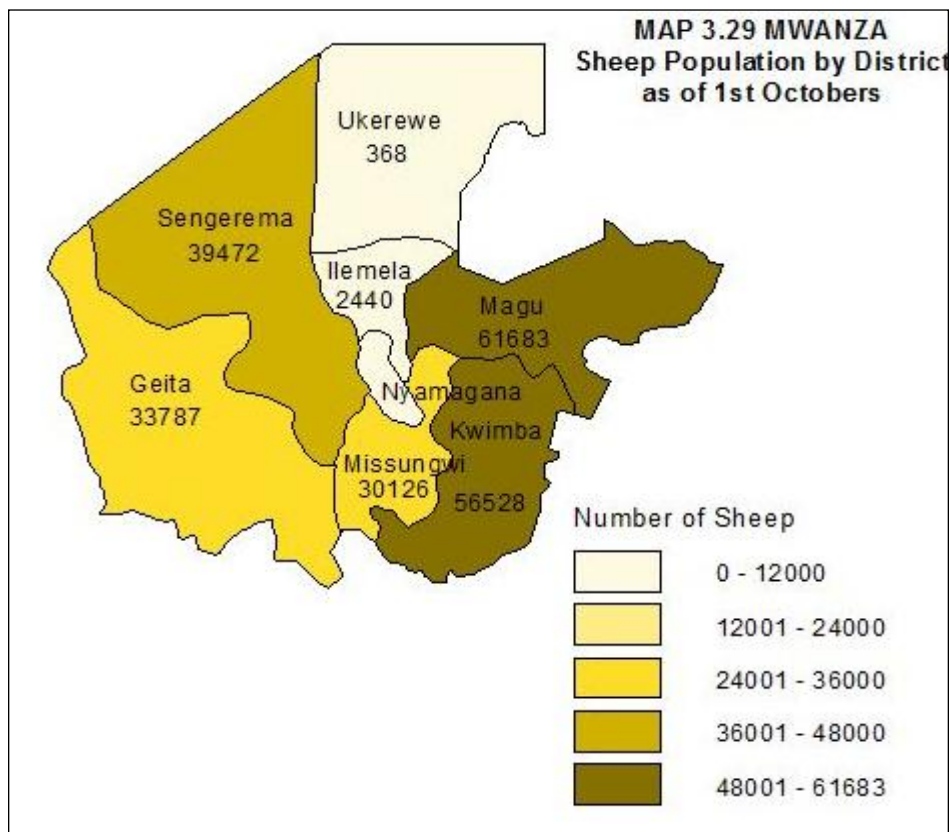


(829) (Chart 3.56, Map 3.25). The highest density of pigs was found in Ilemela district (five flock/km²) while Ukerewe recorded the lowest density.

The largest number of pigs kept was she piglet (5,096) followed by male piglet (4,767), sow/gilt (4,357), boar (2,073), and the smallest number was that of castrated male (983) (Table 3.38).

Table 3.38: Total Number of Pigs by Type of Pigs and District as of 1st October 2008

District	Pig Type					Total
	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	
Ukerewe	184	0	645	0	0	829
Magu	159	0	476	0	1,269	1,903
Kwimba	256	384	256	384	1,279	2,558
Sengerema	810	0	1,215	1,215	1,215	4,453
Geita	277	0	277	2,769	0	3,323
Missungwi	282	282	375	188	751	1,877
Ilemela	106	318	1,114	212	583	2,334
Total	2,073	983	4,357	4,767	5,096	17,277



3.10.5 Chicken Population

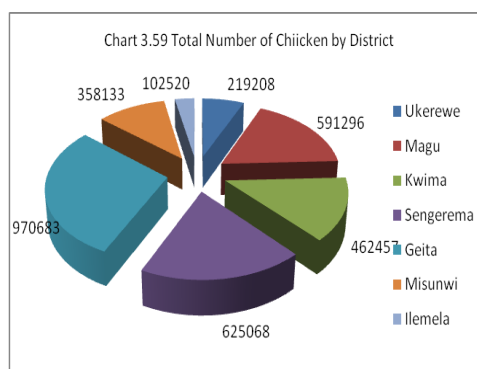
3.10.5.1 Chicken Population

The total number of chickens in the region was 3,329,364 (Table 3.39). These were distributed in a total of 280,515 household thus giving an average of 12 chickens per chicken rearing households.

The District with the largest number of chicken was Geita (970,683) followed by Sengerema (625,068), Magu (591,296), Kwimba (462,457), Missungwi (358,133), and Ukerewe (219,208) while Ilemela had the smallest number (102,520) (Chart 3.57). Furthermore, while the regional density of chicken was 244, Missungwi district had the highest density of chicken (420 flock per km²), followed by Geita (343), and Magu (304). On the other hand the lowest density was recorded in Sengerema (175) followed by Ilemela (206 head per km²) (Table 3.39, Map 3.26).

Table 3.39: Total Number of Chicken and Area (Km²) by District

District	Chicken	Area (Km ²)	Density
Ukerewe	219208	2351	93
Magu	591296	1943	304
Kwimba	462457	1580	293
Sengerema	625068	3568	175
Geita	970683	2827	343
Misungwi	358133	853	420
Ilemela	102520	497	206
Total	3329365	13619	244



3.10.5.2 Improved Chicken Breeds (layers and broilers)

The number of improved chicken was 11,981 out of which layers were 9,115. In contrast, broilers accounted for only 2,866 of the population. The largest number of layers was recorded in Ilemela (5,304) while none of the households in Kwimba, Sengerema, and Geita reported raising layers. In regard to broilers, the largest number was recorded in Kwimba (1,279) closely followed by Magu (1,110) while none of the households covered in the census in Ukerewe and Sengerema indicated keeping broilers (Chart 3.58, Table 3.40).

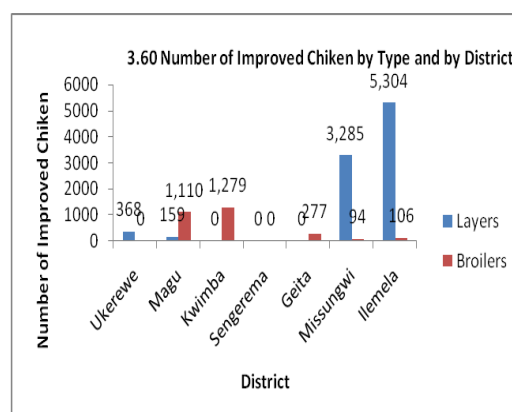


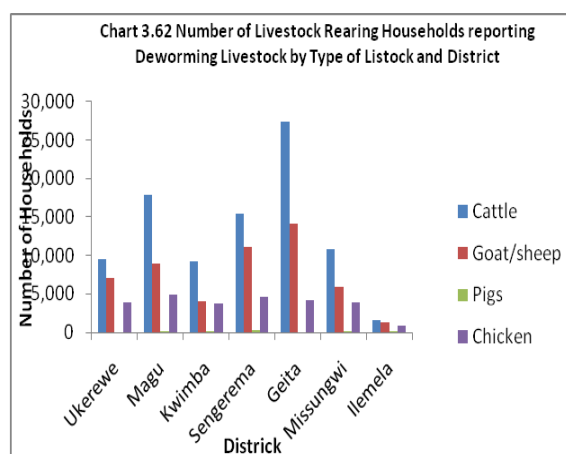
Table 3.40: Number of Improve Chicken by Type and District

	Layers	Broilers	Total
Ukerewe	368	0	368
Magu	159	1,110	1,269
Kwimba	0	1,279	1,279
Sengerema	0	0	0
Geita	0	277	277
Missungwi	3,285	94	3,379
Ilemela	5,304	106	5,410
Total	9,115	2,866	11,981

3.10.6 Pests and Parasites Incidences and Control

Incidences of ticks and tsetse were reported by livestock keeping households in the region. With regard to incidences of ticks, Ukerewe had the highest percent of households reporting tick problem (57%) closely followed by Magu (53%). In other districts the percent of households reporting tick problem was as follows: Missungwi (51%), Kwimba (52%), Geita (45%), and Sengerema (42%) while

Ilemela had the lowest percent of households reporting the problem (34%). Regarding incidences of tsetse, Ukerewe had the highest percent of households reporting incidences of tsetse (12%) followed by Kwimba (10%). In the other remaining districts the incidences seemed insignificant. Generally, in all districts incidences of ticks were much higher than those of tsetse (Chart 3.59).

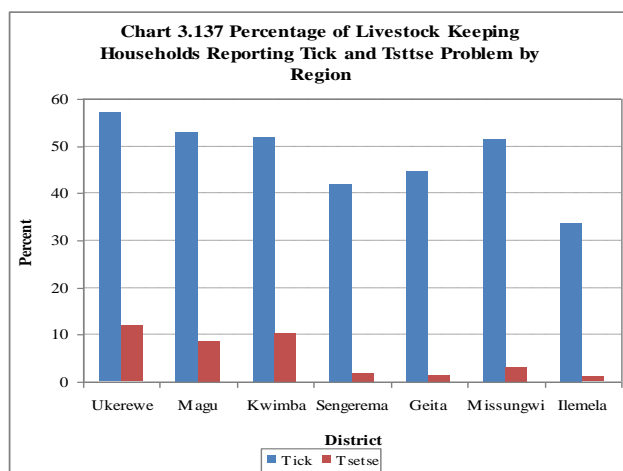


3.10.6.1 Deworming

A total of 119,893 livestock keeping households de wormed their livestock. Magu recorded the highest percent of households reporting deworming cattle (87%) while the lowest percent was recorded in Ilemela (53%). In regard to deworming of goat/sheep, Misungwi recorded the highest percent of households (30%) while Ukerewe had the lowest (17%). Moreover, Ilemela had the highest percent (5%) of households that dewormed their pigs while Geita and Ukerewe recorded the lowest percent (0.0%). Generally, deworming was most practiced with cattle followed by goat/sheep while deworming of pigs was limited (Chart 3.60).

3.10.6.2 Households Infested with Ticks

Geita had the largest number of households infested with ticks (42,095) followed by Magu (27,908), Sengerema (24,695), Kwimba (19,184), Ukerewe (18,145), Missungwi (16,799), and Ilemela had the smallest number of households (3,447). However, in terms of percentage, Ukerewe had the highest percent of households infested with ticks (57.10%) followed by Magu (53.01%), Kwimba (51.90%), Missungwi (51.44%), Geita (44.71%), Sengerema (41.92%), whereas Ilemela had the lowest percent (33.60%) (Map 3.27).

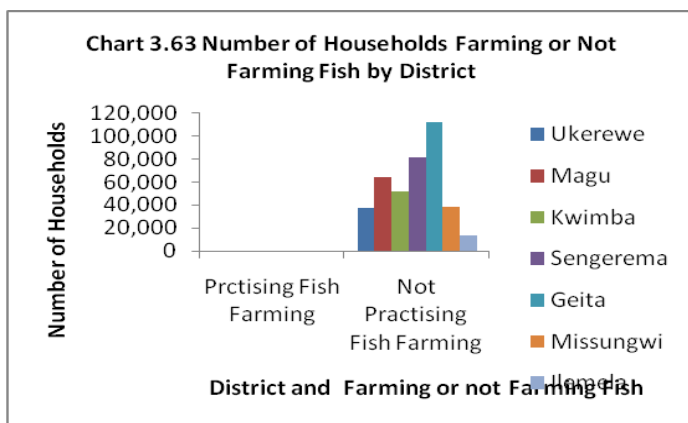


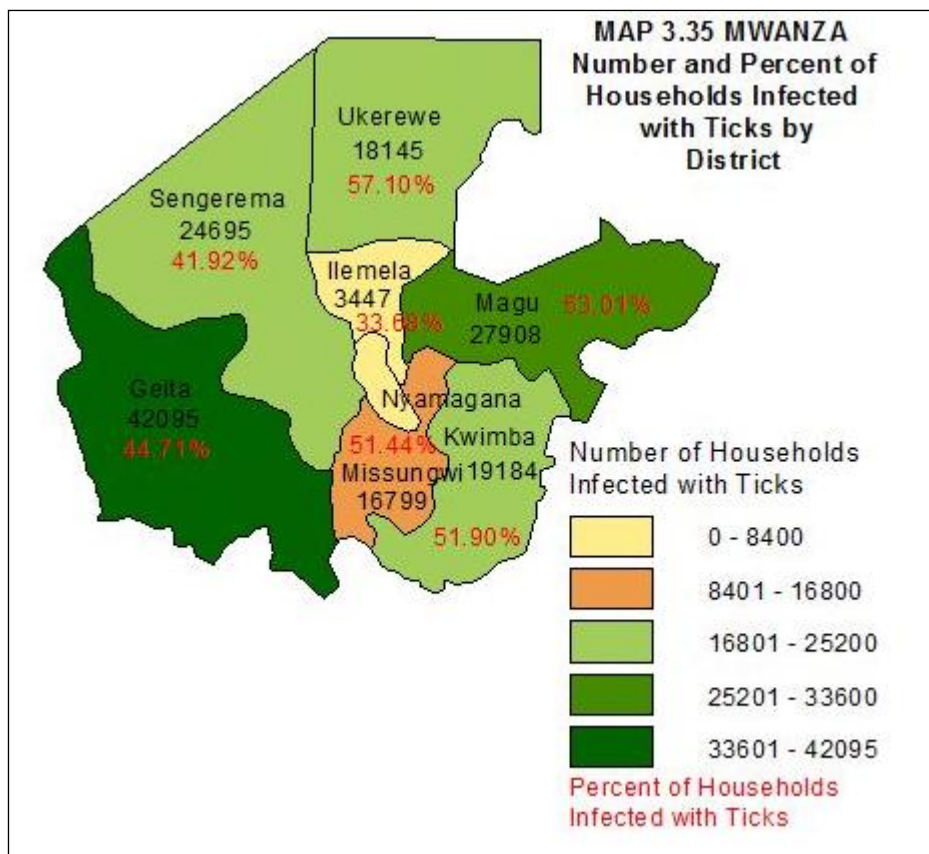
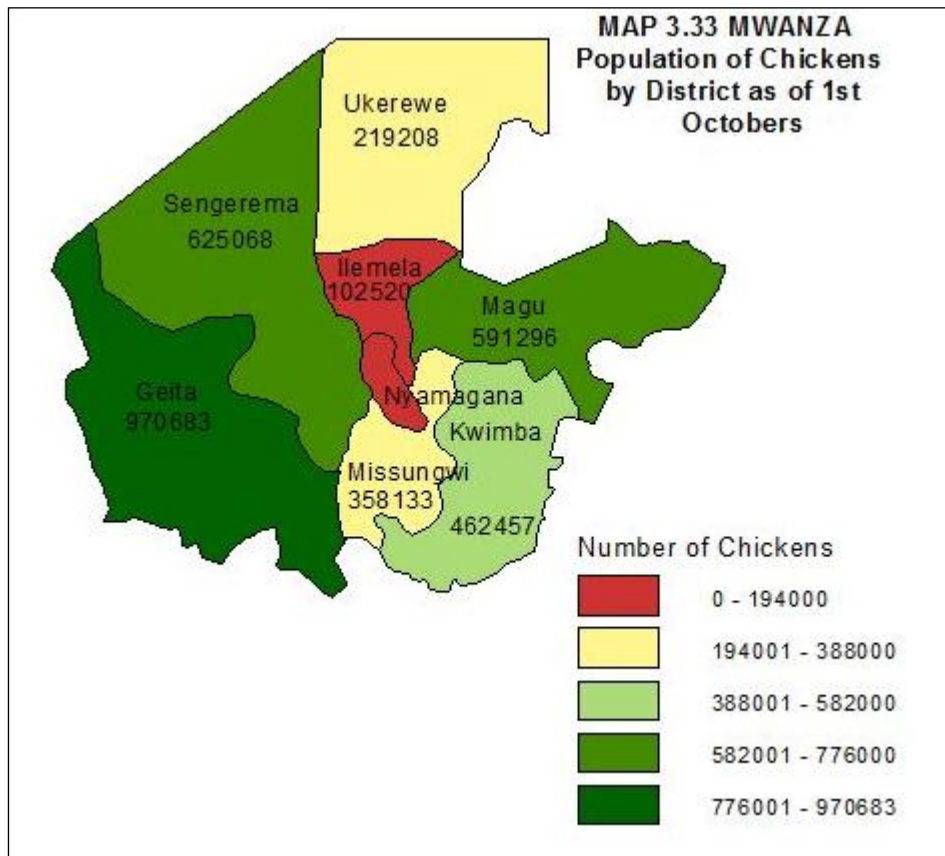
3.10.7 Fish Farming

Fish farming in Mwanza was negligible as only 92 households in Ukerewe practised fish farming (Charts 3.61 and 3.62, Table 3.41).

Table 3.41: Number of Households Practicing or not Practicing Fish Farming by District

	Practicing	Not Practicing	
District	Fish Farming	Fish Farming	Total
Ukerewe	92	37,210	37,302
Magu	0	64,220	64,220
Kwimba	0	51,796	51,796
Sengerema	0	81,979	81,979
Geita	0	112,162	112,162
Missungwi	0	38,009	38,009
Ilemela	0	13,524	13,524
Total	92	398,901	398,993





3.11 Poverty Indicators

Data for the agricultural census on poverty were collected for the purpose of providing a base for tracking progress in poverty reduction strategies undertaken by the government. Specific attention was paid to the following indicators.

3.11.1 Type of Toilets

Out of a total 398,993 households 8% did not have toilets while the rest (92%) had one type of toilet or the other. Most of those who reported owning toilets used traditional pit latrines (344,417, 86%) while those with improved latrines accounted for 5% (20,842) and only 1% (2,905) had flush toilets (Chart 3.63, Table 3.42).

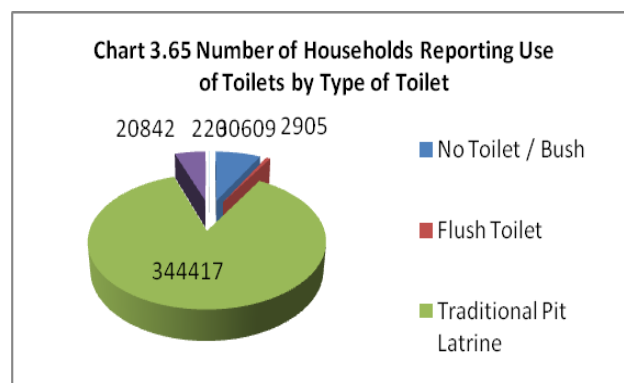


Table 3.42: Number and percentage of Households by Use of Toilets

Type of Toilet	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine	Other Type	Total
Households	30,609	2,905	344,417	20,842	220	398,993
%	8	1	86	5	0	100

Geita District had the largest number of households without toilets (10,524, 34%) while Ilemela had the lowest (1,167, 3.8%). However, Geita had the largest number of traditional toilets (96,930) closely followed by Sengerema (75,097) while Ilemela had the lowest (10,607). Furthermore, Magu had the largest number of households with improved latrines (7,453) and the least number of the same was recorded in Missungwi (845). None of the households in Missungwi reported having flush toilets while the largest number was recorded in Ukerewe (737) (Table 3.43). In contrast, Missungwi had the highest percent of households without toilets (14%) and Ilemela had the lowest percent of households without toilets (4%) (Table 3.44, Map 3.28).

Table 3.43: Number of Households Using Toilets by Type of Toilet and District

District	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine	Other Type	Total
Ukerewe	2,118	737	32,789	1,566	92	37,302
Magu	3,488	317	52,961	7,453	0	64,220
Kwimba	5,627	512	44,123	1,407	128	51,796
Sengerema	2,429	202	75,097	4,251	0	81,979
Geita	10,524	554	96,930	4,154	0	112,162
Missungwi	5,256	0	31,909	845	0	38,009
Ilemela	1,167	583	10,607	1,167	0	13,524
Total	30,609	2,905	344,417	20,842	220	398,993

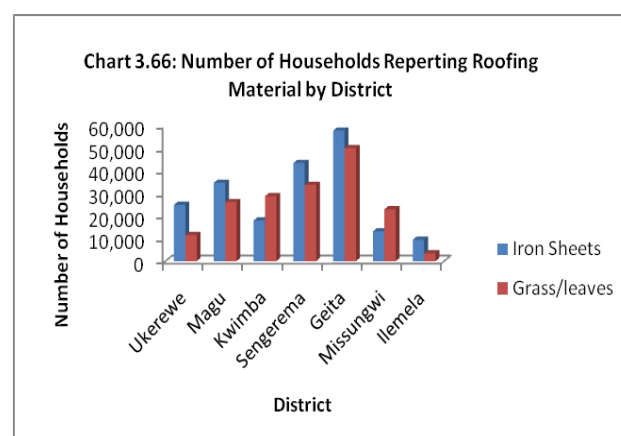
Table 3.44: Percent of Households by Type of Toilet and District

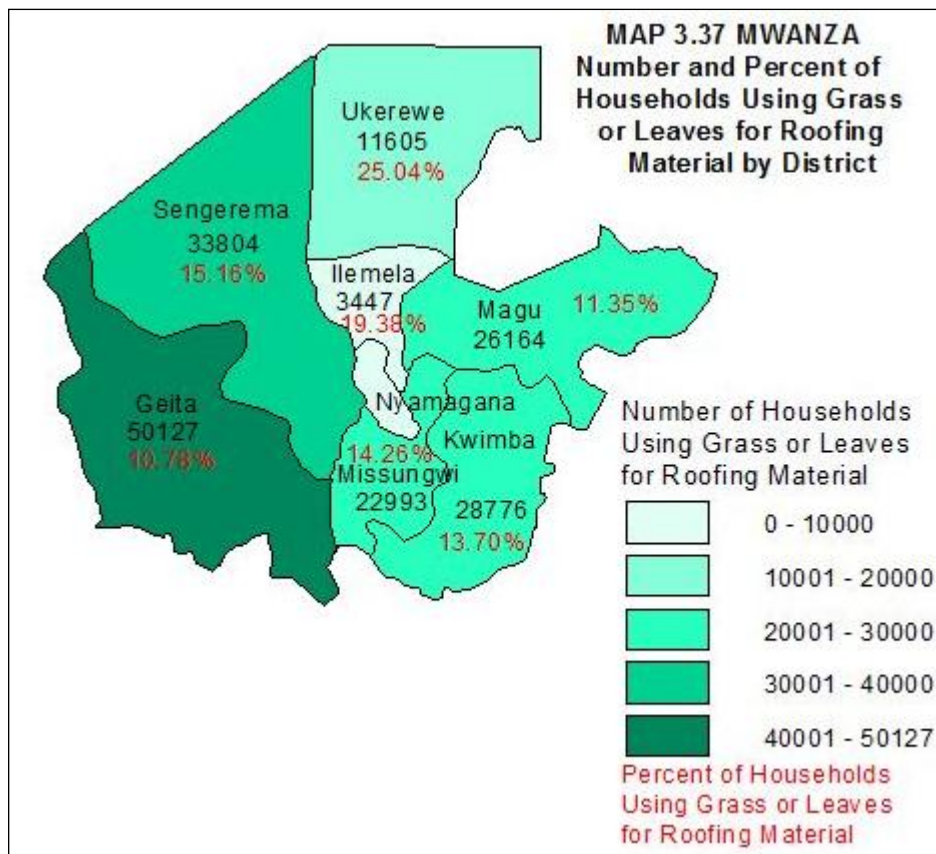
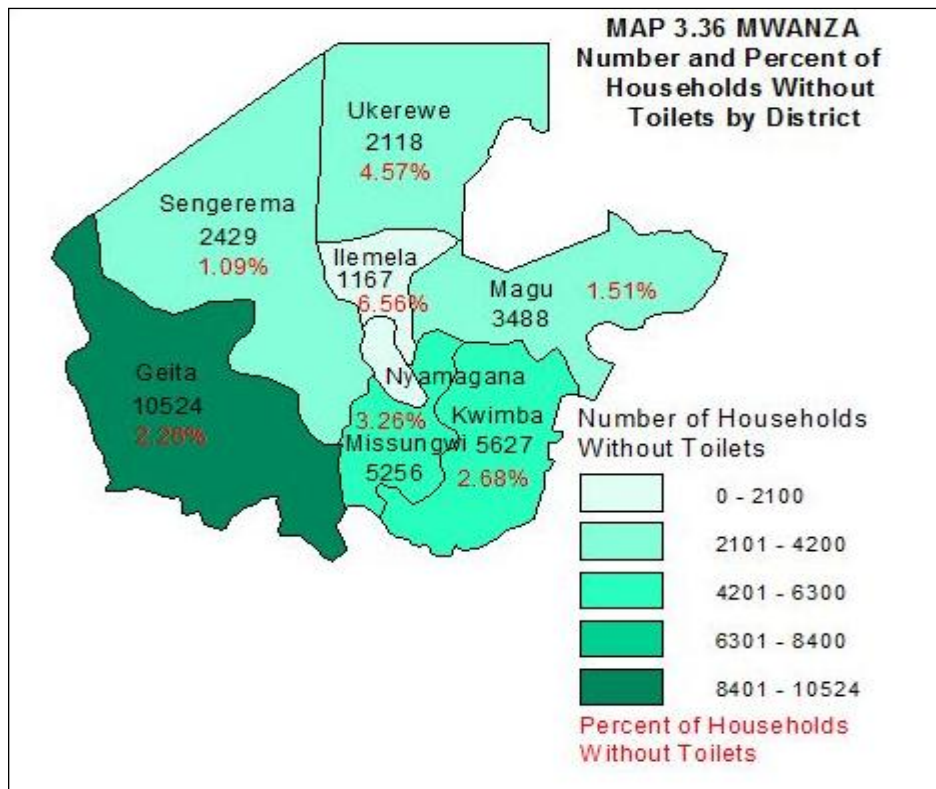
District	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine -	Total
Ukerewe	5.6	2	87.9	4.2	100
Magu	5.4	0.5	82.5	11.6	100
Kwimba	10.9	1	85.2	2.7	100
Sengerema	3	0.2	91.6	5.2	100
Geita	9.4	0.5	86.4	3.7	100
Missungwi	13.8	0	84	2.2	100
Ilemela	8.6	4.3	78.4	8.6	100
Total	7.7	0.7	86.3	5.2	100

3.11.2 Roofing Material

Generally except for Missungwi and Kwimba, households using iron sheet for roofing material were more than those using grass/leaves (Chart 3.64). On the other hand, Geita had the largest number of households using leaves or grass as roofing material (50,127) while Ilemela had the smallest number (3,447). However, Geita recorded the lowest percent of households using

leaves or grass as roofing material (10.78%) . In contrast, Ukerewe reported the highest percent of households with leaves/grass roofing (25.09%) (Map 3.29).



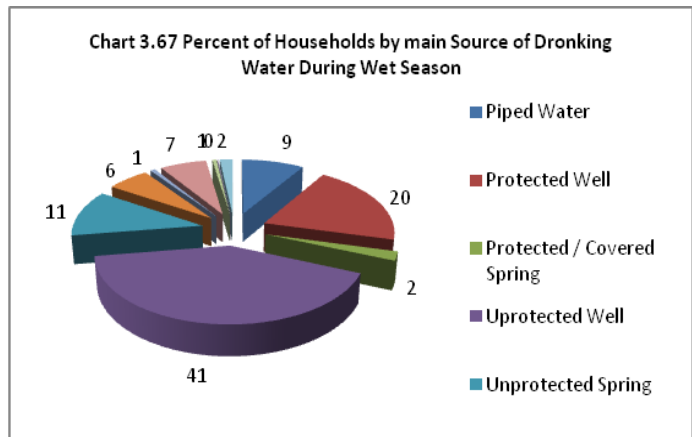


3.11.3 Access to Drinking Water

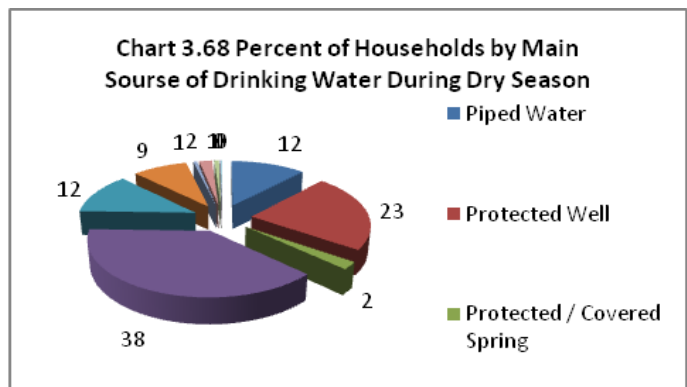
There exist various sources of drinking water in Mwanza region. However, during the wet season the main source of water is unprotected wells (41%) (Chart 3.65).

However, the main source of drinking water for agricultural households during the dry season was unprotected wells (38%)

followed by protected wells (23%), unprotected springs (12%), piped water (12%), and surface water (9%). Other sources of drinking water, with less significant were protected/covered spring, uncovered rain water catchments, covered rain water catchment and water vendors (Chart 3.66).



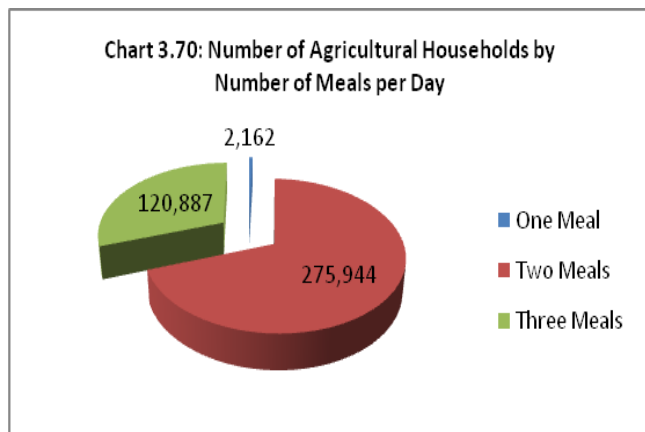
In Mwanza region 225,945 of agricultural households obtained drinking water within a distance of less than one kilometer during the wet season while the figure drops to 169,899 during the dry season. The most common distance to the source of drinking water was between 1-199 km in both wet and dry seasons.



3.11.4 Food Consumption Pattern

3.11.4.1 Number of Meals per Day

Majority of households in Mwanza region had two meals a day (275,944, 69.2%), followed by those who had three meals per day (120,887, 30.3%) and those who had only one meal a day (2,162, 0.5%) (Chart 3.66).



Geita had the largest number of households reporting eating three (3) meals per day (31,294) while Ilemela recorded the smallest number (3,394). Furthermore, Geita had the largest number of households that had two meals a day (80,036) while the smallest number was recorded in Ilemela (9,971). Also, Geita had the largest number of households that had one meal a day (831) while Missungwi had the smallest number (94) (Table 3.45). However, Missungwi had the highest percent of households eating 3 meals (51%) while Ukerewe had the lowest percent of households eating 3 meals a day (14%) (Table 3.45, Map 3.30).

Table 3.45: Number of Households Reporting Number of meals they normally take per day by District

District	One	Two	Three	Total
Ukerewe	184	31,868	5,250	37,302
Magu	159	48,363	15,698	64,220
Kwimba	128	29,543	22,125	51,796
Sengerema	607	57,487	23,885	81,979
Geita	831	80,036	31,294	112,162
Missungwi	94	18,676	19,239	38,009
Ilemela	159	9,971	3,394	13,524
Total	2,162	275,944	120,887	398,993
%	0.5	69.2	30.3	100

3.11.4.2 Meat Consumption Frequencies

A total of 215,063 accounting for 54% of agricultural households reported not having eaten meat during the week preceding the census while those who ate meat once were 123,250 (31%). Besides, those reporting having eaten meat more than once were 60,680

Table 3.46: Number and Percent of Households by Frequency of Meat Consumption and District

District	Meat Eating					Total
	Not Eaten	%	Once	%	> Once	
Ukerewe	19434	52	10592	28	7276	37302
Magu	39007	61	16650	26	8563	64220
Kwimba	22125	43	21870	42	7801	51796
Sengerema	46759	57	23278	28	11943	81979
Geita	61481	55	35172	31	15509	112162
Missungwi	19520	51	12294	32	6194	38009
Ilemela	6736	50	3394	25	3394	13524
Total	215063	54	123250	31	60680	398993

(15%). Magu recorded the highest percent of households that had not eaten meat (61%) while Kwimba had the lowest percent in this category. The highest percent of households that reported eating meat once was found in Kwimba (42%) while Ilemela recorded the lowest percent (25%). Moreover, Geita recorded the highest percent of households that ate meat more than once (25.56%) and the lowest percent was reported in Ilemela (5.6%) (Table 3.46, Map 3.31).

3.11.4.3 Fish Consumption Frequencies

The largest number of households had eaten fish more than once (252,653) or about 63% of agricultural households. On the other hand, 72,937 or 18% reported eating fish once (18%) while 73,402 households accounting for 18% of agricultural households ate fish

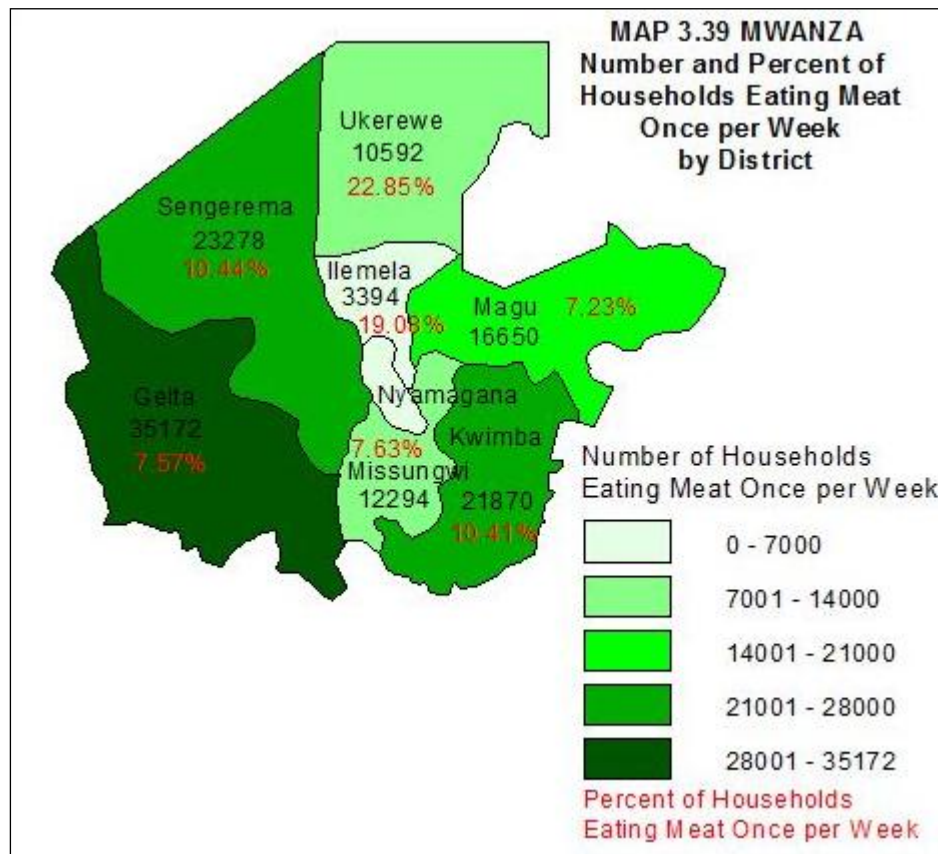
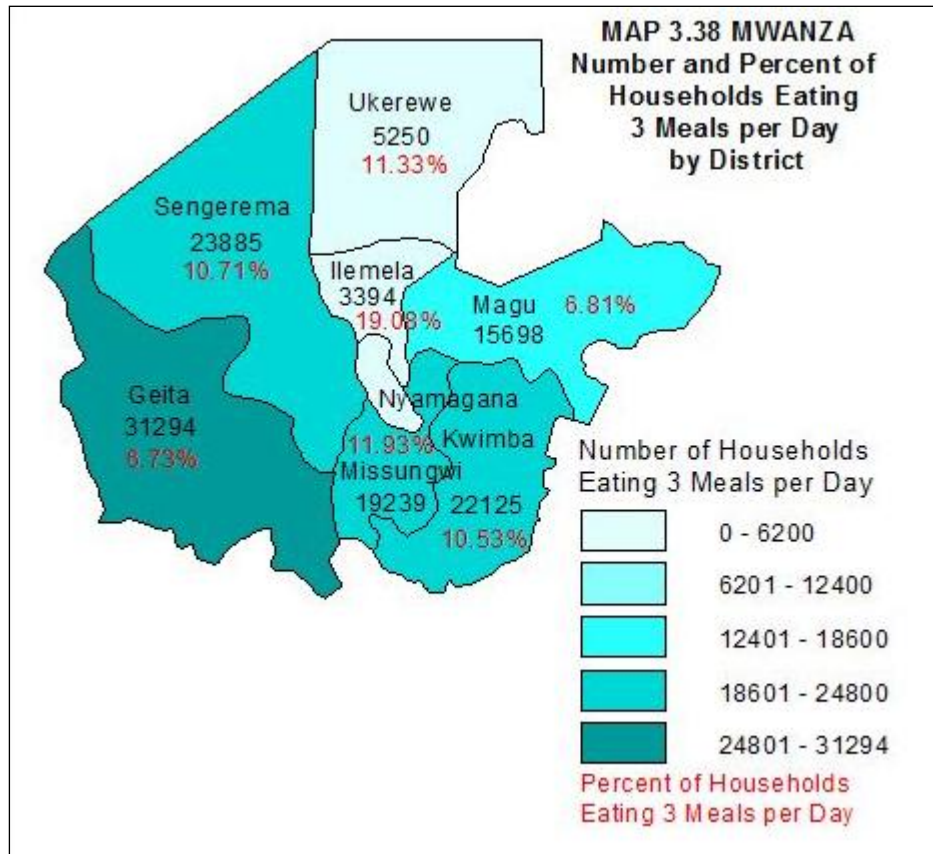
Table 3.47 Number and Percent of Households by Frequency of Fish Consumption and by District

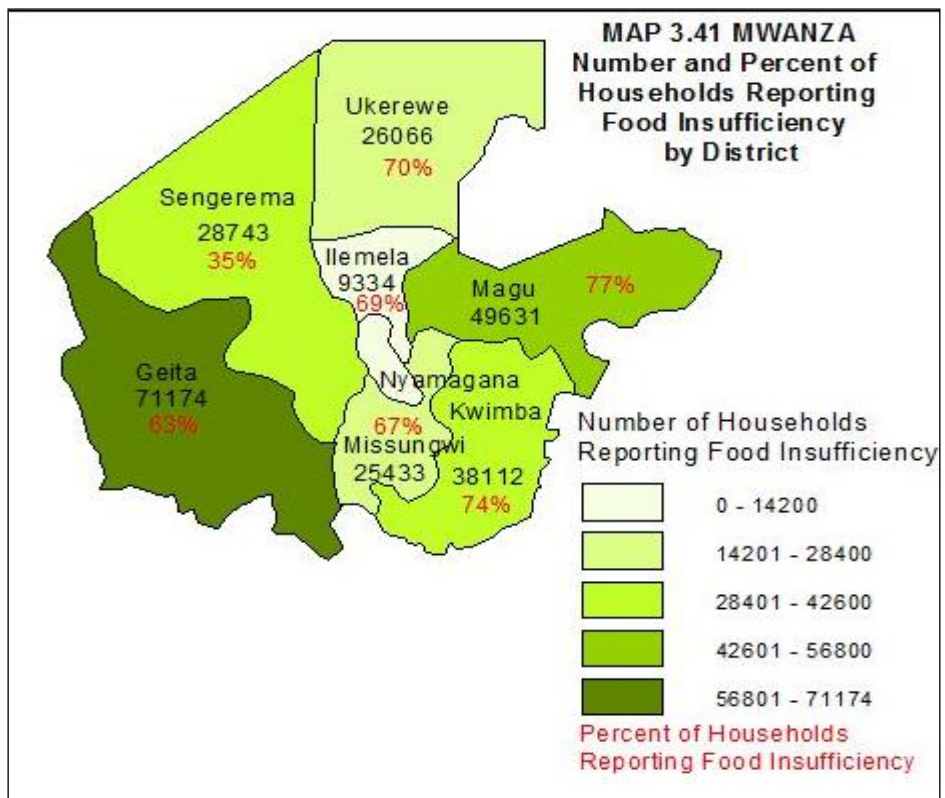
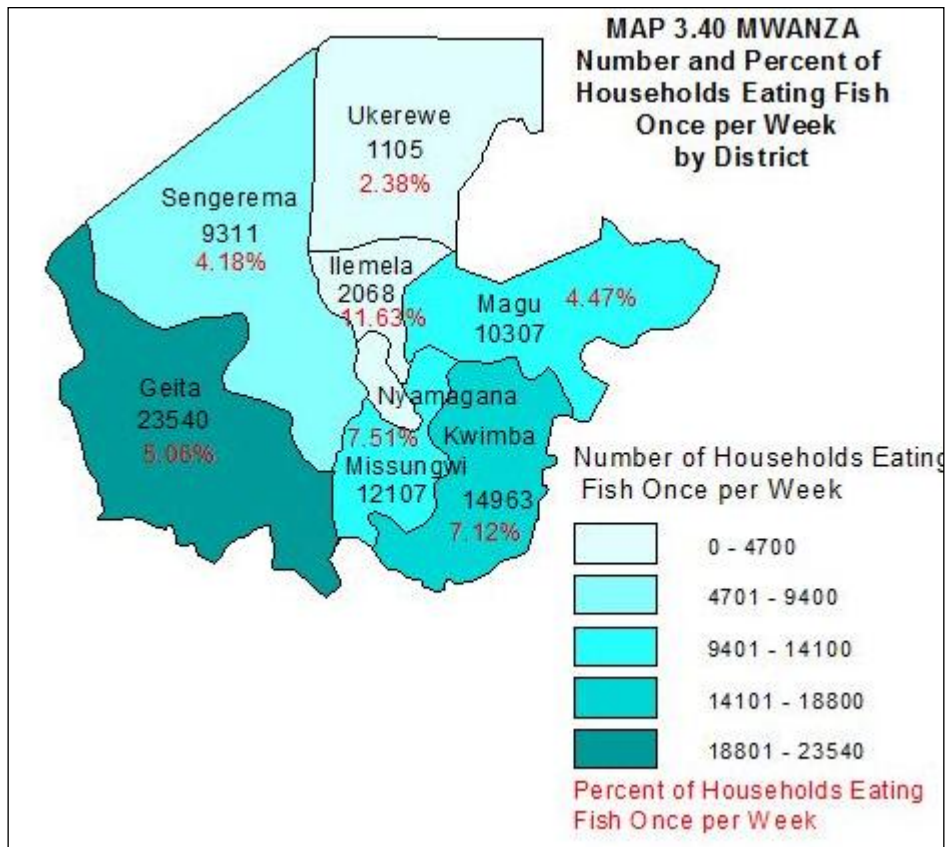
District	Fish Eating					Total
	Not Eaten	%	Once	%	> Once	
Ukerewe	829	2	110	3	35368	37302
Magu	10624	17	10307	16	43289	64220
Kwimba	16498	32	14963	29	20335	51796
Sengerema	4858	6	9311	11	67810	81979
Geita	27140	24	23540	21	61481	112162
Missungwi	11449	30	12107	32	14453	38009
Ilemela	1538	11	2068	15	9918	13524
Total	72937	18	73402	18	3E+05	398993

once. Kwimba had the highest percent of households that had did not eat fish (32%) while Ukerewe recorded the lowest percent (2%). Also, Missungwi had the highest percent of households reporting eating fish once (32%). Besides, Sengerema recorded the highest percent of households that reported eating fish more than once (26.83%). In contrast, the lowest percent in this category was reported in Ilemela (3.92%) (Table 3.47, Map 3.32).

3.11.5 Food Security

Household food insecurity was widely experienced in Mwanza region. The largest number of households reporting food insecurity was found in Geita (71,174) followed by Magu (49,631), Kwqimba (38,112), Sengerema (28,743), Ukerewe (26,066), Missungwi (25,433) while the smallest number of food insecure households was reported in Ilemela (9,334). However, on the basis of percentage, Magu recorded the highest percent of food insecure households (77%) followed by Kwimba (74%), Ukerewe (73%), Ilemela (69%), Missungwi (67%), Geita (63%) whilst Sengerema had the lowest percent (35%) (Map 3.33).





4. MWANZA PROFILES

This section presents the status of crops and livestock production, access to natural resources and services, demography and poverty for both the region as a whole and for each district.

4.1 Mwanza Region Profile

The regional profile describes the status of the Agriculture sector in the region and compares it with other regions in the country. Mwanza region has the third largest utilised land area (approximately 700,000 ha) most of which is planted with annual crops, however permanent crops are also grown mainly as mixed crops with annuals but also small amounts of permanent mono-crop stands exist. The percent of land available to smallholders that was utilised during the census year was average compared to other regions, however the response to insufficiency of land was high (73%). Mwanza has two planting seasons and the short rainy season had a greater planted area than the long rainy season during the census year, however the area planted per household was greater in the long rainy season than in the short rainy season.

The region has the largest planted area of maize and paddy per square kilometre and the largest planted areas under cassava in the country. It also has the second largest planted areas of cotton in the country. Compared to other regions, the area under sorghum and bean production is moderate to low. Vegetable production in Mwanza is moderate. Of the permanent crops mangos, bananas, and oranges are the most important.

The region has the fourth largest planted area under irrigation; however the number of households practicing irrigation has remained unchanged over the last 10 years. As with most regions, most land clearing is done by hand slashing. The region has the third largest planted area cultivated by oxen, however around 60 percent is cultivated by hand. Eighty percent of the planted area had no fertiliser, the remaining area was applied with farm yard manure and virtually no chemical fertilizer was used.

Mwanza has the highest percent of unprotected storage in Tanzania with approximately 80 percent of households using sacks or open drums for storage. Most processing was done by neighbours' machines and of the small amount of processed products sold, most was to the local market/trade store. The region had one of the lowest percent of households receiving extension services in the country.

It has low to moderate number of trees planted by smallholders and a moderate number of households with erosion control/water harvesting structures; however it has the largest number of erosion control and water harvesting bunds in the country.

Mwanza has a high population of livestock. It has the second highest population of cattle in the country and has the highest density. Improved cattle types are virtually absent in Mwanza. The region has one of the highest densities of goats in the country; however it has low numbers of sheep and one of the lowest populations of pigs. It is the third highest milk producer in the country and the farm gate price for milk is very low.

The region has the second highest population of chickens in the country and it has the highest density. The number of improved chickens is very low however egg production is relatively high.

The region has one of the highest utilization of organic fertilizer in terms of area although the application rate per household was average. It has a moderate to high use of draft animals for cultivation. The rate of disease infection is moderate to low and considering the high cattle population it has a low incidence of trypanosomiasis. Access to livestock infrastructure and services is moderate to poor. Mwanza has the highest number of smallholders receiving extension services from Large Scale Farmers. However, this is still a very small number compared to extension provision from the government. There are a small number of fish farmers in the region.

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The region has the second highest population of chickens in the country and it has the highest density. The number of improved chickens is very low however egg production is relatively high.

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4.2 District Profiles

The following district profiles highlight the characteristics of each district and compare them in relation to population, main crops, livestock, production, productivity, access to services, among others.

4.2.1 Ukerewe

Ukerewe district has the second lowest number of households in the region and it has a low percentage of households involved in smallholder agriculture. Most smallholders are involved in crop and livestock. .

Ukerewe had the fifth highest percent of the area planted with fruit and vegetables (1.2%) after Missungwi (11.8%), Magu (16.9%), Sengerema (17.02%), and Geita (44.2%) and almost twice as much as Kwimba (0.5%). It had the third highest percent of total area planted with perennial crops (17.21%) after Sengerema (24.23%), and Geita (34.31%) and had over and above Kwimba with only 2.65% of the area planted with perennial crops. Although the District has limited land area for agricultural production, in terms of cassava production it (with Magu) recorded the highest yield of cassava (2 tons/ha) almost twice the lowest yield of cassava recorded by Geita (1.1 tons/ha).

Compared with other districts Ukerewe is the only District in Mwanza region having 0.97 ha of usable area per household while other districts had 0.99 ha. Besides, it had the smallest planted area per household (0.68 ha) compared to Kwimba, which had the largest planted area per household (0.91 ha). Also, the District had the lowest percent of land utilization (70.44%) compared with Kwimba, which had the highest percent of land utilization (91.74%). Furthermore, it had the smallest area planted with paddy per paddy growing households (0.31 ha) as well as the smallest area planted with groundnuts (9 ha, 0.04%).

Regarding the use of yield enhancing inputs, Ukerewe had the lowest percent of planted area with improved seeds (1%) far less than Ilemela, which recorded the highest percent (10%). Similarly, it had the smallest area of annual crops under irrigation (158 ha) compared with Geita with almost a third of the area under irrigation (6,135 ha). Besides, it had the lowest percent of households storing crops in the region (92%) after Magu (94%), Sengerema (95%), Ilemela (96%), Geita (97%), and Kwimba (98%).

Credit was obtained from various sources. However, cooperatives were important sources of credit in Ukerewe as was the case in Magu and Missungwi. Access to extension advice was quite limited and actually the district recorded the lowest percent in the region (28.5%) .

Agricultural households in Ukerewe kept different types of livestock. The District had the sixth largest population of cattle (66,039) compared with 497,665 in Geita followed by Magu (485,056), Kwimba (368,201), Sengerema (281,969), Missungwi (250,674), but had far more cattle than Ilemela (27,367). Besides, it recorded the fifth largest number of goats (79,118) after Missungwi (104,080), Kwimba (161,327), Magu (183,145), and Geita (244,817). However, the District had far more goats than Ilemela (24,874). Also, it had the seventh largest number of chicken (219,208) almost twice the number of chicken in Ilemela (102,520).

Moreover, it had the smallest number of sheep (368). Also, it had the smallest number of pigs (829) compared with Sengerema, which had the largest number (4,453) followed by Geita (3,323), Kwimba (2,558), Ilemela (2,334), Magu (1,903), and Missungwi (1,877).

With respect to some indicators of poverty, Ukerewe had the largest number of flush toilets (737) and recorded the lowest percent of households that did not eat fish (2%).

4.2.2 Magu

Magu District had third largest number of households in Mwanza region (64,220) after Sengerema (81,979), and Geita (133,776). Besides, it recorded the highest literacy level (78.8%) in the region compared with Geita, which reported the lowest literacy level (66.2%). The District had 0.99 ha of usable area per household. It had had the fifth largest planted area per paddy growing household (0.55 ha) after Sengerema (0.64 ha), Kwimba (0.73 ha), Missungwi (0.80 ha), and Geita (0.96 ha).

Magu had the third highest percent of area planted with fruits and vegetables (16.9%) after Sengerema (17.02%) and Geita, which had the highest percent of fruit and vegetable planted area (44.2%). Besides, it had the third largest planted area per fruit and vegetable growing household (0.2 ha) compared with Ilemela (1.1 ha) and Missungwi (0.3 ha).

Compared with other districts Magu and Ukerewe recorded the highest yield of root and tuber crops (2 tons/ha) while Geita reported the lowest yield (1.1 ton/ha).

Magu District had the fifth highest percent of households storing crops (94%) after Sengerema (95%), Ilemela (96%), Geita (95%), and Kwimba (98%). Also, it had the fourth highest percent of households selling crops (72.71%).

With respect to livestock, Magu had the second highest percent of households receiving extension advice (81.3%) after Ilemela (85.8%). It also had the second largest population of cattle (485,056) compared with Geita, which recorded the first largest population of cattle (497,665). In addition, the District had the second largest number of goats (183,145) after Geita (244,817) and recorded the first largest number of sheep (61,683) accounting for 28% of the total population of sheep in the region. However, it had the fifth largest number of pigs (1,903) but had more pigs than Missungwi (1,877) and Ukerewe (829).

The District had the third largest number of chicken (591,296) after Geita (970,683) followed by Sengerema (625,068) but had more chicken than Kwimba (462,457), Missungwi (358,133), Ukerewe (219,208) and Ilemela (102,520).

Magu had the largest number of households with improved latrines (7,453) while the smallest number was recorded in Missungwi (845).

4. 2.3 Kwimba

Kwimba District had the fourth largest number of agricultural households (64,220) less than Geita (133,776), Sengerema (81,979) and Magu (64,220) but more than Missungwi (38,009), Ukerewe (37,302), and Ilemela (13,524).

Kwimba had the largest planted area per household (0.91 ha) and the highest percent of land utilization (91.74%).

While the average area planted with paddy per household was 0.72ha, Kwimba had the third largest planted area per paddy growing household (0.73 ha), which is less than Geita (0.96 ha) and Missungwi (0.80 ha) but more than area recorded in Sengerema (0.64 ha), Magu (0.55 ha), Ilemela (0.39 ha), and Ukerewe (0.31 ha).

Kwimba District recorded the second largest area planted with sorghum (225,390 ha), which was more than the area reported in Sengerema (23,131 ha) and Missungwi (15,384 ha). However, it recorded the smallest area planted with cassava (3,216ha), the lowest percent of area planted with fruit and vegetable planted (0.5%), the lowest percent of total planted area with perennial crops (2.65%), and the lowest planted area with improved seeds (1%).

Kwimba had the highest percent of households storing crops (98%) and the highest percent of households selling crops (76.24%).

The District had the fifth highest percent of households receiving extension (47.7%) less than Ilemela (85.8%), Magu (81.3%), Missungwi (56.2%), and Sengerema (51.9%) but higher than Geita (37.3%) and Ukerewe (28.5%).

In regards to livestock Kwimba had the third largest population of cattle (368,201), which was less than that found in Geita (497,665), and Magu (485,056) but more than the population of cattle reported in Sengerema (281,969), Missungwi (250,674), Ukerewe (66,039), and Ilemela (27,367). Besides, it had the third largest number of goats (161,327), the second largest number of sheep and the third largest number of pigs (2,558), and the fourth largest number of chicken (462,457). Moreover, the District reported the highest percent of households reporting eating meat once (42 %).

4.2.4 Sengerema

Sengerema had the second largest number of agricultural households (81,979) after Geita (133,776). Also, although the largest area planted with maize was recorded in Geita (94,392 ha), Sengerema reported the highest yield of maize (1.34 ton/ha). It had the fourth planted area per

paddy growing households, which was less than Geita (0.96 ha), Missungwi (0.80 ha), Kwimba (0.73 ha) but more than Magu (0.55 ha), Ilemela (0.39 ha), and Ukerewe (0.31 ha).

Sengerema had the third largest area planted with sorghum ((23,131 ha), the second highest percent of fruit and vegetable planted area Sengerema (17.02%), and the fourth largest planted area per fruit and vegetable growing households Sengerema (0.2ha).

The District recorded the second highest percent of total planted area with perennial crops (24.23%) after Geita (34.31%) and the fourth highest percent of households reporting storing crops (95%), which was lower than Kwimba (98%), Geita (97%), and Ilemela (96%) but higher than Magu (94%) and Missungwi and Ukerewe (92%).

Sengerema recorded the fifth highest percent of households selling crops Sengerema (67.62%) as well as the fifth highest percent of households receiving extension Sengerema (51.9%).

Sengerema had the fourth largest population of cattle (281,969), which was less than the number found in Geita (497,665), Magu (485,056), and Kwimba (368,201) but was far more than cattle recorded in Missungwi (250,674), Ukerewe (66,039), and Ilemela (27,367). Besides the District had the third largest number of sheep (39,472), the first largest number of pigs (4,453), and the second largest number of chicken (625,068) after Geita (970,683).

Sengerema had the second largest number of toilets (75,097), which was less than those recorded in Geita (96,930) but far more than those in Ilemela (10,607).

4.2.5 Geita

Geita had the largest number of agricultural households (133,776) followed by Sengerema (81,979), Magu (64,220), Kwimba (51,796), Missungwi (38,009), Ukerewe (37,302), and Ilemela (13,524). Also, it had the largest number of crop growing households (65,635).

However, the District recorded the lowest literacy level (66.2%).

Geita had the largest number of households engaged in maize production (111,885) accounting for 30% of households in Mwanza region. Besides, it the largest area planted with paddy (41,328 ha)

accounting for about 24% (23.8 %) of the total area planted with paddy in the region, the largest planted area per paddy growing households (0.96 ha), the largest planted area with sorghum (41,328 ha), the largest area planted with cassava (35,911ha) And the largest area planted with groundnuts 9378 ha (45.6%)..

Moreover, Geita had the highest percent of fruit and vegetable planted area (44.2%) followed by Sengerema (17.02%), Magu (16.9%), Missungwi (11.8%), Ukerewe (1.2%), and Kwimba had the lowest percent (0.5%). However, it had fifth largest planted area per fruit and vegetable growing household (0.2 ha).

Geita recorded the highest percent of total planted area with perennial crops (34.31%) followed by Sengerema (24.23%), and Ukerewe (17.21%) while Kwimba had the lowest percent (2.65%). Also, of all districts, Geita had the largest area planted with organic fertilizer in Vuli (10,346 ha).

In Mwanza region, the area of annual crops under irrigation was 18,231 ha with almost a third of the area under irrigation found in Geita (6,135 ha).

Geita had the second highest percent of households storing crops (97%) after Kwimba (98%) and the first largest number of households that sold crops (101,915) but the third highest percent of households selling crops (73.60%). However, it reported the sixth highest percent of households receiving extension advice (37.3%).

The largest population of cattle was found in Geita (497,665). Also it had the largest number of goats (244,817) and the second largest number of pigs (3,323).

Geita had the largest number of chicken (970,683). However, it had the largest number of households without toilets (10,524, 34%) and the largest number of households using leaves or grass for roofing material (50,127).

Geita had the largest number of households reporting eating 3 meals per day (31,294) and the largest number of households that had one meal a day (831). Also, it had the largest number of households reporting eating fish (85021).

4.2.6 Missungwi

Missungwi had the fifth largest number of agricultural households (38,009) compared with Geita (133,776), Sengerema (81,979), Magu (64,220), Kwimba (51,796), Missungwi (38,009), Ukerewe (37,302), and Ilemela (13,524).

While the largest area planted with maize was recorded in Geita (94,392 ha) Missungwi recorded the lowest yield (0.74 ton/ha).

Missungwi had the second largest planted area per paddy growing household (0.80 ha). It had the fourth largest planted area with sorghum (15,384 ha) as well as the fourth highest percent of fruit and vegetable planted area (11.8%). Also, it had the second largest planted area per fruit and vegetable growing households (0.3 ha).

While Geita had the largest area planted with organic fertilizer in Vuli (10,346 ha), Missungwi recorded the largest area planted with organic fertilizer in Masika (2,422 ha).

Missungwi had the lowest percent of households storing crops (92%) but recorded the second highest percent of households selling crops (74.47%) and the third highest percent of households receiving extension advice (56.2%).

Regarding livestock distribution, Missungwi had the fifth largest population of cattle (250,674), the fourth largest population of goats (104,080); the fifth largest population of sheep Missungwi (30,126), the sixth largest number of pigs (1,877), and fifth largest number of chicken (358,133).

Missungwi had the highest percent of households without toilets (14%) and the second largest number of households with improved latrines (845). However, none of the households in the District reported having flush toilets.

The District had the highest percent of households using leaves/grass for roofing (60%). Also while the District had the smallest number of households reporting eating one meal a day (94), it had the highest percent of households eating 3 meals (51%) and the highest percent of households reporting eating fish once (32%).

4.2.7 Ilemela

Ilemela District had the smallest number of agricultural households (13,524) and the smallest number of crop growing households in Mwanza region.

The District recorded the highest literacy rate amongst male heads of households (55%) but the lowest rate on the part of female heads of household (45%).

Ilemela had the smallest number of households engaged in maize production (13,206) out of a total of 263,281 ha planted with maize. Besides, it had had only 1,723 ha planted with paddy in the region representing about only 1.38% and recorded the sixth largest planted area per paddy growing households (0.39 ha) compared with Missungwi (0.80 ha), Kwimba (0.73 ha), Sengerema (0.64 ha), Magu (0.55 ha) but more than Ukerewe (0.31 ha).

The District had the smallest area planted with sorghum (1,723 ha) and the smallest planted area per perennial crops growing household (0.50 ha) but recorded the largest planted area per fruit and vegetable growing household (1.1 ha) compared with Missungwi (0.3 ha), Magu (0.2 ha), Sengerema (0.2ha), and Geita and Missungwi (0.2 ha). Also, it had the highest percent of area with improved seeds (10%).

Ilemela had the third highest percent of households storing crops Ilemela (96%) lower than Kwimba (98%) and Geita (97%) but higher than Magu (94%) as well as Missungwi and Ukerewe (92%). Besides, it recorded the sixth highest percent of households selling crops (76.24%) and the highest percent of households receiving extension advice (85.8%) compared with Magu (81.3%), Missungwi (56.2%), Sengerema (51.9%), Kwimba (47.7%), Geita (37.3%), and Ukerewe (28.5%). Ilemela District had the smallest population of cattle (27,367), goats (24,874), and chicken (10,607). However, it recorded the fourth largest number of pigs (2,334).

The District had the lowest percent of households without toilets (1,167, 3.8%) and the smallest number of traditional toilets (10,607). Also, it recorded the smallest number of households using leaves or grass for roofing material (3,447) and the lowest percent of households using leaves or grass as roofing material (25%).

Ilemela recorded the smallest number of households reporting eating 3 meals per day (3,394). Furthermore, it recorded the smallest number of households that had two meals a day (9,971) and had the lowest percent of households who reported eating meat once (25%). Besides, Ilemela recorded the smallest number of households (11,986).

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TYPE OF AGRICULTURE HOUSEHOLDS

2.1.2 TYPE OF AGRICULTURE HH: Number of Agriculture Households by Type of Holding by District during 2007/08 Agriculture year

District	Crops Only		Livestock Only		Pastoralists		Crops & Livestock		Total Number of Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number of households	%	Number of households	%	Number of households	%	Number of households	%			
Ukerewe	13,447	36	92	0	92	0	23,671	63	37,302	37,118	23,763
Magu	31,238	49	317	0	159	0	32,506	51	64,220	63,744	32,823
Kwimba	29,031	56	0	0	0	0	22,765	44	51,796	51,796	22,765
Sengerema	54,451	66	405	0	0	0	27,124	33	81,979	81,575	27,529
Geita	65,635	59	0	0	0	0	46,526	41	112,162	112,162	46,526
Missungwi	18,770	49	94	0	0	0	19,145	50	38,009	37,916	19,239
Ilemela	9,334	69	53	0	0	0	4,137	31	13,524	13,471	4,190
Total	221,907	56	961	0	251	0	175,874	44	398,993	397,781	176,835

HOUSEHOLD DEMOGRAPH

3.1 Number of Heads of Agricultural Households by sex of head and District, 2007/08 Agricultural Year

Region	Male		Female		Total
	Number	Percent	Number	Percent	
Ukerewe	32,697	88	4,605	12	37,302
Magu	52,803	82	11,417	18	64,220
Kwimba	41,821	81	9,976	19	51,796
Sengerema	69,227	84	12,752	16	81,979
Geita	95,545	85	16,617	15	112,162
Missungwi	30,971	81	7,039	19	38,009
Ilemela	11,456	85	2,068	15	13,524
Total	334,519	84	64,474	16	398,993

3.2 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Sex and Age Group, 2007/08 Agricultural Year, Mwanza Region

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	231,819	52	215,155	48	446,974	100
5 - 9	218,875	50	217,250	50	436,125	100
10 - 14	219,667	52	201,083	48	420,750	100
15 - 19	159,707	51	151,964	49	311,670	100
20 - 24	101,139	50	102,454	50	203,592	100
25 - 29	74,972	43	98,342	57	173,314	100
30 - 34	66,539	46	78,303	54	144,842	100
35 - 39	62,362	47	70,727	53	133,090	100
40 - 44	51,842	51	49,480	49	101,322	100
45 - 49	49,002	51	47,783	49	96,786	100
50 - 54	35,695	55	29,222	45	64,917	100
55 - 59	24,111	58	17,375	42	41,486	100
60 - 64	22,679	58	16,408	42	39,087	100
65 - 69	13,263	59	9,312	41	22,575	100
70 - 74	12,740	58	9,107	42	21,847	100
75 - 79	9,506	55	7,857	45	17,363	100
80 - 84	4,943	57	3,764	43	8,707	100
Above 85	5,919	53	5,337	47	11,255	100
Total	1,364,779	51	1,330,924	49	2,695,703	100

3.3 Number of Heads of Agricultural Households by Marital Status, sex of head and District, 2007/08 Agricultural Year

District	Married						Not Married					
	Male		Female		Total		Male		Female		Total	
Ukerewe	29,750	96	1,105	4	30,855	100	368	50	368	50	737	100
Magu	49,473	92	4,440	8	53,913	100	634	50	634	50	1,269	100
Kwimba	37,344	94	2,430	6	39,774	100	639	45	767	55	1,407	100
Sengerema	65,179	94	4,251	6	69,429	100	1,215	50	1,215	50	2,429	100
Geita	87,514	96	3,600	4	91,114	100	1,108	40	1,662	60	2,769	100
Missungwi	29,000	96	1,126	4	30,126	100	188	40	282	60	469	100
Ilemela	10,554	95	583	5	11,138	100	159	50	159	50	318	100
Total	308,813	95	17,536	5	326,349	100	4,311	46	5,087	54	9,398	100

3.4 HOUSEHOLD DEMOGRAPHYS: Number of Household Members Who Can Read and Write languages by type of language and District

District	Swahili		Swahili & English		Any Other Language		Don't Read / Write		Total
	Number	%	Number	%	Number	%	Number	%	
Ukerewe	143,314	10	8,750	7	368	5	49,092	8	201,524
Magu	245,937	17	42,813	34	0	0	77,856	12	366,607
Kwimba	176,107	12	16,498	13	3,197	47	85,688	13	281,490
Sengerema	308,485	21	18,218	14	405	6	120,034	19	447,142
Geita	408,490	28	26,033	20	2,769	41	222,939	35	660,230
Missungwi	143,872	10	12,670	10	0	0	66,352	10	222,894
Ilemela	49,006	3	2,811	2	0	0	17,025	3	68,841
Total	1,475,212	100	127,792	##	6,740	100	638,985	100	2,248,729

3.5 Number of Heads of Agricultural Households By Status of writing and reading Languages, sex of head and District, 2007/08 Agricultural Year

District	Swahili						Swahili & English					
	Male		Female		Total		Male		Female		Total	
Ukerewe	24,960	92	2,026	8	26,987	100	1,566	100	184	0	1,013	100
Magu	38,215	85	6,501	15	44,716	100	3,806	89	951	11	2,854	100
Kwimba	27,113	86	4,476	14	31,589	100	2,430	100	256	0	1,918	100
Sengerema	53,641	90	6,275	10	59,916	100	3,846	85	607	15	4,048	100
Geita	67,020	93	4,985	7	72,005	100	3,877	75	831	25	3,323	100
Missungwi	20,553	90	2,252	10	22,806	100	1,502	92	94	8	1,220	100
Ilemela	9,016	95	477	5	9,494	100	849	100	0	0	636	100
Total	240,518	90	26,993	10	267,512	100	17,875	88	2,923	12	15,014	100

LAND ACCSESS/OWNERSHIP

TOTAL ANNUAL CROPS AND VEGETABLE PRODUCTION WET & DRY SEASON

PERMANENT CROPS

District	Crops	Area planted(ha)	Area harvested	Quantity Harvested	Yield/kg
	sugar cane	59	26	808	30.953
	Palm oil	0	0	0	0
	Clove	0	0	0	0
	Other	4,034	2,087	5,515	2.6428
	Total	4,130	2129.86	6,730	3.1597

MARKETING

IRRIGATION/ERROSION CONTROL

District	Main method of Obtaining Water				
	Gravity	Hand bucket	Hand pump	motor pump	Other
Ukerewe	0	737	0	0	0
Magu	2,379	2,537	0	0	0
Kwimba	1,918	256	0	0	128
Sengerema	0	202	0	202	0
Geita	2,769	2,216	277	0	0
Missungwi	188	3,660	94	94	0
Ilemela	318	1,538	53	106	0
Total	7,572	11,146	424	402	128

ACCESSES TO FARM INPUTS AND IMPLEMENTS

AGRICULTURAL CREDITS

CROP EXTENSION

CATTLE PRODUCTION

12.1.3 CATTLE PRODUCTION: Number of Households rearing cattle, Head of Cattle and Average Head per Household by Herd size During the 2007/08 Agricultural Year - Mwanza Region

Herd size	Cattle Rearing Households	%	Herd of Cattle	Average Per Houseold
1 - 5	60,184	41	174,536	3
6 - 10	27,017	18	210,644	8
11 - 15	21,649	15	281,083	13
16 - 20	13,059	9	234,411	18
21 - 30	8,885	6	220,903	25
31 - 40	6,921	5	251,652	36
41 - 50	2,509	2	115,661	46
51 - 60	2,022	1	112,414	56
61 -100	2,906	2	225,179	77
101 -150	583	0	73,680	126
151+	414	0	76,808	185
Total	146,149	100	1,976,971	14

12.1.4 CATTLE PRODUCTION: Total Number of Cattle by Cattle Types and Category, 2007/08 Agricultural Year- Mwanza Region

Cattle Types	Indigeneous	Improved Beef	Improved Diary	Total Cattle	%
Uncastrated Bulls	216,108	793	383	217,284	11
Cows	584,516	1,039	1,284	586,838	30
Steers	36,889	0	330	37,219	2
Heifers	348,566	0	779	349,345	18
Male Calves	175,959	317	53	176,329	9
Female Calves	231,918	128	53	232,098	12
Total	1,970,901	2,277	3,794	1,976,971	100

12.1.8 CATTLE PRODUCTION: Total Number Households rearing Cattle and Method of Cattle Identification by District during, 2007/08 Agricultural Year

District	Branding		Cattle Clan		Ear notching		Colour		Earings		Others		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Ukerewe	645	3	1,474	6	184	1	18,789	81	0	0	2,211	9	23,302	100
Magu	16,015	48	3,806	11	6,660	20	3,488	10	793	2	2,537	8	33,299	100
Kwimba	15,219	66	1,663	7	1,279	6	1,407	6	256	1	3,197	14	23,021	100
Sengerema	8,299	26	6,882	22	2,227	7	8,299	26	202	1	5,465	17	31,375	100
Geita	21,325	46	8,862	19	831	2	11,632	25	0	0	3,600	8	46,249	100
Missungwi	10,605	53	2,628	13	1,032	5	3,942	20	94	0	1,877	9	20,178	100
Ilemela	318	8	530	13	212	5	2,015	51	159	4	743	19	3,978	100
Total	72,426	40	25,844	14	12,425	7	49,572	27	1,504	1	19,630	11	181,402	100

GOAT PRODUCTION

12.2.3 GOAT PRODUCTION: Number of Households Rearing Goats, Head of Goats and Average Head per Household by Herd Size as of 1st October 2008- MWANZA

Herd Size	Goat rearing households		Herd of Goats		Average Goats per household
	Number	%	Number	%	
1 - 4	73,633	51	190,491	21	3
5 - 9	43,771	30	279,352	30	6
10 - 14	15,968	11	185,465	20	12
15 - 19	4,451	3	71,747	8	16
20 - 24	3,198	2	67,993	7	21
25 - 29	1,199	1	32,447	4	27
30 - 34	879	1	27,563	3	31
35 - 39	361	0	12,793	1	35
40+	1,018	1	51,901	6	51
Total	144,479	100	919,753	100	6

12.2.4 GOAT PRODUCTION: Total Number of Goats by Category and Type of Goat as of 1st October 2008 - MWANZA

Category	Indigenous		Improved Meat		Improved Dairy		Total	
	Number	%	Number	%	Number	%	Number	%
Billy Goat	88,252	155,473	53	53	286	9,259	164,786	18
Castrated Goat	17,047	36,274	0	0	0	0	36,274	4
She Goat	136,758	472,915	0	0	660	4,160	477,075	52
Male Kid	60,195	119,750	0	0	159	1,586	121,336	13
She Kid	61,164	120,284	0	0	0	0	120,284	13
Total	363,416	904,695	53	53	1,105	15,005	919,753	100

SHEEP PRODUCTION

12.3.4 SHEEP PRODUCTION: Number of Improved Sheep for Mutton by Category and District as of 1st October 2008

District	Number of Improved					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Ukerewe	0	0	0	0	0	0
Magu	0	0	0	0	0	0
Kwimba	0	0	0	0	0	0
Sengerema	0	0	0	0	0	0
Geita	0	0	0	0	0	0
Missungwi	0	0	0	0	0	0
Ilemela	0	0	0	0	0	0
Total	0	0	0	0	0	0

12.3.5 SHEEP PRODUCTION: Number of Households rearing Sheep, Head of Sheep and Average Head per Household by Herd size During the 2007/08 Agricultural Year, Mwanza Region

Herd size	Sheep Rearing Households	%	Herd of sheep	Average Per Houseold
1 - 4	20,044	60	47,316	2
5 - 9	7,993	24	53,714	7
10 - 14	2,460	7	29,147	12
15 - 19	731	2	11,893	16
20 - 24	518	2	11,213	22
25 - 29	554	2	14,401	26
30 - 34	159	0	4,757	30
35 - 39	159	0	6,184	39
40+	552	2	45,778	83
Total	33,169	100	224,403	7

12.3.6 SHEEP PRODUCTION: Total Number of Sheep by Breed Type During the 2007/08 Agriculture Year - MWANZA Region

Category	Number of Indigenous	%	Number of Improved	%	Total	%
Rams	43,183	100	0	0	43,183	19
Castrated Sheep	6,072	100	0	0	6,072	3
She Sheep	114,115	100	0	0	114,115	51
Male Lamb	26,890	100	0	0	26,890	12
She Lamb	34,143	100	0	0	34,143	15
Total	224,403	100	0	0	224,403	100

PIG PRODUCTION

12.4.4 PIG PRODUCTION : Number of Pigs per Household by District as of 1st October 2008

District	Number of households	Number of pigs	Average per household
Ukerewe	184	829	5
Magu	317	1,903	6
Kwimba	128	2,558	20
Sengerema	1,012	4,453	4
Geita	277	3,323	12
Missungwi	188	1,877	10
Ilemela	159	2,334	15
Total	2,265	17,277	8

PESTS AND PARASITES CONTROL

12.5.1: PEST AND PARASITES: Number of Livestock Rearing households deworming Livestock by District during 2007/08 Agriculture Year

District	Deworming Livestock		Not Deworm Livestock		Total	
	Number	%	Number	%	Number of Livestock Rearing households	%
Ukerewe	13,263	41	19,158	59	32,421	100
Magu	20,614	39	32,031	61	52,644	100
Kwimba	12,150	32	26,346	68	38,495	100
Sengerema	23,278	38	38,055	62	61,333	100
Geita	32,402	34	61,758	66	94,160	100
Missungwi	15,110	45	18,301	55	33,411	100
Ilemela	3,076	30	7,319	70	10,395	100
Total	119,893	37	202,967	63	322,859	100

CHICKEN AND OTHER LIVESTOCK

12.6.3 CHICKEN PRODUCTION: Number of Other Livestock by Type of livestock and District as of 1st October 2008

District	Ducks	Guine pigs	Turkeys	Rabbits	Donkeys	Horses	Dogs
Ukerewe	33,802	0	0	0	737	0	7,921
Magu	36,153	0	0	476	1,110	0	35,836
Kwimba	8,825	1,279	639	895	1,918	0	12,917
Sengerema	47,366	0	1,215	0	0	0	12,955
Geita	33,233	0	1,662	0	1,108	0	22,986
Missungwi	11,544	3,566	0	0	188	0	12,388
Ilemela	6,152	53	0	2,599	0	0	3,819
Total	177,075	4,898	3,516	3,970	5,061	0	108,822

12.6.4 : THER LIVESTOCK : Total Number of Other Livestock by Type as of 1st October 2008

Type	Chicken		Others	
	Number	%	Type	Number
Indigenous Chicken	3,317,383	99.6	Ducks	177,075
Layers	9,115	0.3	Guinea pigs	4,898
Broilers	2,866	0.1	Turkeys	3,516
			Rabbits	3,970
			Donkey	5,061
			Horses	0
			Dogs	108,822
TOTAL	3,329,364	100		

LIVESTOCK EXTENSION

12.7.9 LIVESTOCK EXTENSION: Number of households receiving extension advice on Pasture Establishment by District during the 2007/08 agriculture year

District	Source of Livestock Extension												Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Ukerewe	461	41.7	645	58.3	0	0.0	0	0.0	0	0.0	0	0.0	1,105
Magu	4,598	90.6	159	3.1	159	3.1	159	3.1	0	0.0	0	0.0	5,074
Kwimba	2,302	85.7	0	0.0	0	0.0	0	0.0	384	14.3	0	0.0	2,686
Sengerema	4,453	95.7	202	4.3	0	0.0	0	0.0	0	0.0	0	0.0	4,656
Geita	5,262	63.3	0	0.0	0	0.0	0	0.0	2,492	30.0	554	6.7	8,308
Missungwi	1,877	76.9	0	0.0	0	0.0	0	0.0	469	19.2	94	3.8	2,440
Ilemela	1,538	93.5	53	3.2	0	0.0	0	0.0	0	0.0	53	3.2	1,644
Total	20,491	79.1	1,059	4.1	159	0.6	159	0.6	3,345	12.9	701	2.7	25,913

12.7.10 LIVESTOCK EXTENSION: Number of households receiving extension advice on Group formation and strengthening by District during the 2007/08 agriculture year

District	Source of Livestock Extension												Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Ukerewe	1,105	60.0	737	40.0	0	0.0	0	0.0	0	0.0	0	0.0	1,842
Magu	11,100	72.2	3,171	20.6	159	1.0	476	3.1	159	1.0	317	2.1	15,381
Kwimba	5,371	87.5	128	2.1	128	2.1	128	2.1	384	6.3	0	0.0	6,139
Sengerema	10,728	96.4	405	3.6	0	0.0	0	0.0	0	0.0	0	0.0	11,133
Geita	10,247	90.2	554	4.9	0	0.0	0	0.0	277	2.4	277	2.4	11,355
Missungwi	5,162	76.4	657	9.7	657	9.7	94	1.4	188	2.8	0	0.0	6,757
Ilemela	2,175	91.1	106	4.4	0	0.0	0	0.0	53	2.2	53	2.2	2,387
Total	45,888	83.4	5,758	10.5	943	1.7	697	1.3	1,060	1.9	647	1.2	54,993

FISH FARMING

12.8.1 FISH FARMING: Number of Agriculture Households Practising Fish Farming by District during the 2007/08 Agriculture Year

District	Was Fish farming carried out by this household during 2007/08				
	Yes	%	No	%	Total
Ukerewe	92	.2	37,210	99.8	37,302
Magu	0	.0	64,220	100.0	64,220
Kwimba	0	.0	51,796	100.0	51,796
Sengerema	0	.0	81,979	100.0	81,979
Geita	0	.0	112,162	100.0	112,162
Missungwi	0	.0	38,009	100.0	38,009
Ilemela	0	.0	13,524	100.0	13,524
Total	92	.0	398,901	100.0	398,993

12.8.2 FISH FARMING: Number of Agriculture Households by System of Fish Farming and District during the 2007/08 Agriculture Year

District	system of fish farming			
	Natural Pond	Dug out Pond	Water Reservoir	Other
Ukerewe	0	92	0	0
Magu	0	0	0	0
Kwimba	0	0	0	0
Sengerema	0	0	0	0
Geita	0	0	0	0
Missungwi	0	0	0	0
Ilemela	0	0	0	0
Total	0	92	0	0

12.8.6 FISH FARMING: Mean Size of Fish Pond and aveverage Number of fingerings stocked by Dist_ID, 2007/08 Agricultural Year

District	Mean Size of Pond (Sq.metre)	Tilapia	%	Milk fish	%	Prawns/Crabs	Prawns/Crabs	Lulu	%	Total
Ukerewe	100	6	100	0	0	0	0	0	0	6
Magu	0	0	0	0	0	0	0	0	0	0
Kwimba	0	0	0	0	0	0	0	0	0	0
Sengerema	0	0	0	0	0	0	0	0	0	0
Geita	0	0	0	0	0	0	0	0	0	0
Missungwi	0	0	0	0	0	0	0	0	0	0
Ilemela	0	0	0	0	0	0	0	0	0	0
Total	100	6	100	0	0	0	0	0	0	6

12.8.7 FISH FARMING: Number of Agricultural Households By frequency of stocking of Fingerings in fish ponds and District, 2007/08 Agricultural Year

District	Frequency of stocking				Total
	1	2	3	8	
Ukerewe	92	0	0	0	92
Total	92	0	0	0	92

12.8.8 FISH FARMING: Number of Agricultural Households By level of care of fish ponds and District, 2007/08 Agricultural Year

District	Level of Care of Fish Pond				Total
	High	Meadium/Average	Low	8	
Ukerewe	0	0	92	0	92
Total	0	0	92	0	92

BEE KEEPING

POVERTY MODULE

APPENDIX III QUESTIONNAIRES

Definitions and working page for page 5

Storage (Col. 30, Q 5.1.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology.

Marketing Challenges Q 5.1.1 Col. 33:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulatinq transportation and selling of crops.

Inputs (Q 5.1.1)

- Farm Yard Manure:** An organics fertiliser made on farm from animal dung. .
- Compost:** An organic fertiliser made on farm from decomposed plant materials.
- Insecticides:** This is the chemical usde in protecting plants or killing pests.
- Fungicides:** Protects plants from fungi attack.
- Herbicide:** Chemicals used to control or kills weeds.
- Improved seeds:** Scientifically attested to be suitable for agricultural use.

Working area/calculation space

Questions specific definitions

Q 5.1.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Crops storage is keeping/reserving crops in a container or a special place for future use.

Q 5.1.1 Col 31

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Definitions and working page for page 7

Storage (Col. 30, Q 5.2.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storage structures improved through modern technology.

Marketing Challenges Q 5.2.1 Col. 33:

- **Farmers' Association:** Village farmers who came together and started an association for the purposes of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulating transportation and selling of crops.

Inputs (Q 5.2.1)

- Farm Yard Manure:** An organics fertiliser made on farm from animal dung. .
- Compost:** An organic fertiliser made on farm from decomposed plant materials.
- Insecticides:** This is the chemical used in protecting plants or killing pests.
- Fungicides:** Protects plants from fungi attack.
- Herbicide:** Chemicals used to control or kills weeds.
- Improved seeds:** Scientifically attested to be suitable for agricultural use.

Working area/calculation space

Questions specific definitions

Q 5.2.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Crops storage is keeping/reserving crops in a container or a special place for future use.

Q 5.2.1 Col 33

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Definitions and working page for page 9

Storage (Col. 33, Q 5.3.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology .

Marketing Challenges Q 5.3.1 Col. 35:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulatina transportation and selling of crops.

Inputs (Q 5.3.1)

- Farm Yard Manure:** An organics fertliser made on farm from animal dung. .
- Compost:** An organic fertiliser made on farm from decomposed plant materials.
- Insecticides:** This is the chemical usde in protecting plants or killing pests.
- Fungicides:** Protects plants from fungi attack.
- Herbicide:** Chemicals used to control or kills weeds.
- Improved seeds:** Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.3.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Q 5.3.1 Col 35

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 11

Q 6.6

The type of erosion control/Water harvesting (Col 1)

Terraces: Structures constructed on mountain slopes to provide flat terrain for crop planting.

Erosion control bunds: these are bunks of earth/stones built perpendicular to the slope to slow down the speed of water and thus preventing soil erosion. Its differs from terraces in that the soils on these banks are not at ground level .

Gabions: A box like structure made of wire and filled with large stones to prevent gully erosion.

Sand bags: Are used in controlling and preventing gully erosion
Tree belt/wind breaks: Trees planted against the wind direction for breaking wind speed..

Section 7.0 Acces to credit for crop or livestock production

Credit refers to something provided in cash or in kind (such as farm inputs, machines, livestock and other things) for crop or livestock production. The value of the credit must be repaid back to the lender. An Interest may or may not be attached to the value of the credit

The credit may be repaid either in cash or through farm produce to be harvested .

In this question the enumerator is at liberty to inquire up to three sources of credit where the farmer accessed credit from more than one source.

Section 8.0 Agricultural Extension Services

Agricultural Extension Services: Refers to educational services provided to farmers by extension officers for the purposes of increasing crop and livestock production.

Share-cropping: Refers to farming where smallholder / Smallscale farmer enters into an agreement with large scale farmer where the former sells produce to the latter in exchange of provisions of farm inputs and the like. .

Contract farming Farming: Farming agreement entered between smallscale and large scale farmers with regards to markets of farm produce and provision of farm inputs

Q 6.6 Number of water harvesting structures and year of construction

1. The number water harvesting structures refers to the number of working / maintained structures and does not include derelict or irreparable structures.

2. Year of construction refers to the year in which the structures were built, and not the year the structures were last repaired. The year should be written in figures e.g. 1998, 2006.

Section 7.0 Source of agriculture credit

If the farmer obtained credit from more than one source the use the code from the list provided. Start with the main source of credit in Section "7.1.1".a

Section 8.0 Agricultural extension services

1. Ask if the household did receive agricultural extension services during 2007/08 agricultural season from the respondents listed in column 1, then enter column 2.

2. Complete all columns for every extension officer.

Definitions and working page for page 12

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.1.1 to 9.1.7 Cattle

Note:

Q 9.1 is for the actual number of cattle owned or kept by the household (as of 1st October 2008). This number does not include herds of cattle kept on behalf by relatives or neighbours; that is, the cattle outside the residential area of the household under survey.

1. If the the household keep mature fecund female cattle, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of cattle (section 9.1.1 to 9.1.7)

Bull: Mature uncastrated male cattle used for breeding

Cow: Mature female cattle that has given birth at least once

Ox: Castrated male cattle used for farm work

Steer: Castrated male cattle used for meat

Heifer: Female cattle of 1 year up to the first calving

Section 9.3 Goat

Note:

Question 9.3 is for the actual number of owned or raised by the household (as of 1st October 2008) This number does not include goats kept on behalf by relatives or neighbours, that is the goat outside the residential area of the household under survey.

1. If the household has she goats, you would normally expect them to have kids

Type of Goat (Qs 9.3.1 to 9.3.5)

Billy Goat (he-goat): Mature Uncastrated male goat used for breeding

Castrated goat: Male goat that has been castrated

She Goat: Mature female goat over 9 months of age

Definitions and working page for page 13

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.4 Sheep

Note:

Q 9.4 is for the actual number of sheep owned or kept by the household (as of 1st October 2008). This number does not include sheep kept on behalf by relatives or neighbours; that is, the sheep outside the residential area of the household under survey.

1. If the the household keep ewes, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of Sheepe (Section 9.4.1 to 9.4.5)

Ram: Mature Uncastrated male sheept used for breeding

Castrated s heep: Male sheep that has been castrated

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Section 9.5 Pigs

Note:

Question 9.3 is for the actual number of pigs owned or raised by the household (as of 1st October 2008). This number does not include pigs kept on behalf by relatives or neighbours, that is the cattle outside the residential area of the household under survey. .

1. If the household has she goats, you would normally expect them to have kids in column

Type of Pigs (Qs 9.5.1 to 9.5.5)

Boar: Mature Uncastrated male pig used for breeing

Sow: Mature female pig that has given birth to at least one lttter of pigs.

Gilt: Female pig of over 3 months up to the first farrowing

Piglet: Young pig less than 3 months of age

Identification <input type="text"/>								
9.4 SHEEP				9.5 PIGS				
Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No=2 (If the answer is No proceed to Section 9.5) <input type="checkbox"/>				Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No=2 (If the answer is No proceed to Section 9.6) <input type="checkbox"/>				
Number of sheep as of 1.10.2008				Number of pigsp as of 1.10.2008				
Na.	Type of sheep	Number of indigenous sheep	Number of improved	Total	Na.	Type Pigs	Number of pigs	
	(1)	(2)	(3)	(5)		(1)	(2)	
9.4.1	Ram	<input type="text"/>	<input type="text"/>	<input type="text"/>	9.5.1	Boar	<input type="text"/>	
9.4.2	Castrated sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	9.5.2	Castrated male	<input type="text"/>	
9.4.3	She sheep	<input type="text"/>	<input type="text"/>	<input type="text"/>	9.5.3	Sow/Gilt	<input type="text"/>	
9.4.4	Male lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	9.5.4	Male piglet	<input type="text"/>	
9.4.5	Female lamb	<input type="text"/>	<input type="text"/>	<input type="text"/>	9.5.5	Female piglet	<input type="text"/>	
Grand total				<input type="text"/>	Grand total			<input type="text"/>
9.6 OTHER LIVESTOCK								
	Type of animal	Number as of 1 October 2008	Number of eggs			Type of animal	Number as of 1 October 2008	Number of Eggs
	(1)	(2)	(3)			1	(2)	(3)
9.6.1	Local chicken	<input type="text"/>	<input type="text"/>		9.6.6	Turkeys	<input type="text"/>	<input type="text"/>
9.6.2	Layers	<input type="text"/>	<input type="text"/>		9.6.7	Rabbit	<input type="text"/>	
9.6.3	Broilers	<input type="text"/>			9.6.8	Donkeys	<input type="text"/>	
9.6.4	Ducks	<input type="text"/>	<input type="text"/>		9.6.9	Horses	<input type="text"/>	
9.6.5	Guinea pigs	<input type="text"/>			9.6.10	Dogs	<input type="text"/>	

Definitions and working page for page 14**Control of livestock diseases causing bugs**

Livestock worm control medicine: Medicine used to kill or control livestock on livestock . It is often used for cattle, goats, sheep and pigs.

Tiick: Is a dangerous bug that sucks blood form livestock and transmits animals diseases from one to the other animal.

Tse tse fly: A fly like bug that sucks blood from livetsock and transmits diseases sleewping sickness from one to the other animal.

Livestock advice (Section 9.8)

IA service provided by extension officers to livestock keepers for increasing livestock production.

9.7 LIVESTOCK DISEASES AND PEST CONTROL		Identificatio	
Did you livestock during 2007/08 agriculture year? (Yes=1, No=2) (If the answer is No proceed to Section 9.7.5)		<input type="checkbox"/>	
Which animals did your deworm? (Yes=1, No =2, Not applicable=3 in the relevant box)		<input type="checkbox"/>	
9.7.1 Cattle <input type="checkbox"/>	9.7.2 Goat/Sheep <input type="checkbox"/>	9.7.3 Pigs <input type="checkbox"/>	
9.7.4 Poultry <input type="checkbox"/>		<input type="checkbox"/>	
9.7.5 Do you experience tick problem with your livestock? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.6 How did you control tick problem? Control method (Q. 9.7.6): Dipping.....1 Spaying.....2 Application of medicine on back bone.....3 None..4 Other.....8		<input type="checkbox"/>	
9.7.7 Do you experience Tse tse problem with your livestock? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.8 How do you control Tse tse problem with your livestock? Control method (Q. 9.7.8): Dipping.....1 Spaying.....2 Traps.....3 None..4 Other.....8		<input type="checkbox"/>	
9.7.9 Do you experience Newcastle disease problem with your poultry? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.10 How do you control Newcastle disease problem with your poultry? Control/curative methods (Q. 9.7.10): Vaccination..1 Herbs....2 None..3		<input type="checkbox"/>	
9.7.11 Did you experience Fowl Typhoid with your poultry? Yes=1, No=2 , Not applicable=3		<input type="checkbox"/>	
9.7.12 How did you control/ cure Fowl Typhoid with your poultry? Control/curative methods (Swali 9.7.12) Vaccination..1 Herbs....2 Noe..3		<input type="checkbox"/>	
9.7.13 Were your cattle vaccinated against the following diseases? (Yes = 1, No = 2, Not applicable=3). 9.7.13 A: Foot and Mouth diseases <input type="checkbox"/> 9.7.13B: Skin disease <input type="checkbox"/>		<input type="checkbox"/>	
NOTE: If answers to Qs 9.1 to 9.6 is No (THIS THE HOUSEHOLD DOES NOT RAISE LIVESTOCK,) Proceed to q.9.9			
9.8 Extension services on livestock			
Did you receive the following extension advice on the following? (IF THE ANSWER IS NO IN COL 2 PROCEED TO THE FOLLOWING QUESTION)			
Na.	Livestock extension advice (1)	Received Extension advice (Yes=1, No=2) (2)	Source of Extension (3)
9.8.1	Feed and better feeding methods	<input type="checkbox"/>	<input type="checkbox"/>
9.8.2	Improved livestock shed (Goat, Dairy cattle, Poultry and pigs)	<input type="checkbox"/>	<input type="checkbox"/>
9.8.3	Milking and hygiene	<input type="checkbox"/>	<input type="checkbox"/>
9.8.4	Cattle fattening	<input type="checkbox"/>	<input type="checkbox"/>
9.8.5	Livestock diseases control	<input type="checkbox"/>	<input type="checkbox"/>
9.8.6	Livestock keeping in line with land availability	<input type="checkbox"/>	<input type="checkbox"/>
9.8.7	Pasture establishment and maintenance	<input type="checkbox"/>	<input type="checkbox"/>
9.8.8	Forming and strengthening groups/cooperatives	<input type="checkbox"/>	<input type="checkbox"/>
9.8.9	Calf rearing	<input type="checkbox"/>	<input type="checkbox"/>
9.8.10	Basics of production and use of improved bulls (AI)	<input type="checkbox"/>	<input type="checkbox"/>
9.8.11	Animals feed production	<input type="checkbox"/>	<input type="checkbox"/>
9.8.12	Other extension advice (Specify)	<input type="checkbox"/>	<input type="checkbox"/>
Source of agriculture extension (Swali 3) SGovernment.....1 NGO/Development project.....2 Cooperative Union.....3 Large Scale farmer.....4 Radio/TV/Newspapers.....5 Neighbour.....6 Other source8			

Definitions and working page for page 15

General definitions

Fish farming: Refers to the rearing/production of fish. It is different from fishing in that in fish farming the fish have to be reared. While in fishing, fishing nets or traps are used to catch fish from rivers, lakes and the sea; thus fishing should not be included in this section

I

Question Specific Definitions (Q 9.9)

Production unit number (Col 1): A production unit is a pond river/lake which is treated as a separate entity for the production of fish eg it may be by virtue of manageable size, maturity of fish, tye of fish etc. eg. a farmer may have 3 fish ponds (each one is a separate production unit).

Frequency of stocking (Col . 5): What is the number of time the farmer puts new fingerlings into the pond each year.

Fingerlings: These are young immature fish used for stocking ponds.

Sols: (Col 10 & 11)

If no fish were sold enter "0" in column 10 and 11`

Fish sold (Col.12)

Kama hakuna samaki waliouzwa jaza "0" katika safuwima 12

Working space for page 15

Definitions and working page for page 16**10.0 Household poverty indicators****Number of rooms used for sleeping in the household (Q 10.1.4)**

Include sitting room, dining room, kitchen, etc if used for sleeping.

It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building / house that is not divided into rooms is considered to have one room.

Household assets (Q 10.2):

These assets must be functional. Do not include if broken.

Access to drinking water (Q 10.4):

If there is more than one source use the one, which the hh uses most frequently.

Main source of hh cash income:(Q 10.7:

Activity that provides the hh with the most cash during 2007/08 agricultural season.

10.0 POVERTY INDICATORS Identification

<p>10.1 HOUSE CONSTRUCTION Specify materials used in the construction of the following sehemu zifuatazo</p> <p>10.1.1 Roof <input type="checkbox"/> 10.1.2 Floor <input type="checkbox"/> 10.1.3 Wall <input type="checkbox"/></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>Roofing materials</u> Iron sheets.....1 Tiles.....2 Concrete.....3 Asbestos....4 Grass/Makuti.....5 Grass and mud...6 Other.....8</p> </div> <div style="width: 45%;"> <p><u>Floor materials</u> Earthen material.....1 Wood.....2 Wooden tiles...3 Tiles.....4 Cement.....5 Other.....8</p> </div> </div> <div style="margin-top: 10px; background-color: #e0f2f1; padding: 5px;"> <p><u>Main materials</u> Grass and pieces of woods.....1 Mud.....2 Wet bricks.....3 Burnt bricks...4 Wood.....5 Block bricks.....6 Stonese.....7 Bricks /Mawe ya kichanga.....8</p> </div>		<p>10.2 Household property Does your household woen the following?, (Yeso=1 No =2)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Number</th> <th>Property</th> <th>Yes=1, No=2 (1) (2)</th> </tr> </thead> <tbody> <tr> <td>10.2.1</td> <td>Radio (Radio, Radio Casette, music system)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.2</td> <td>Land line</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.3</td> <td>Celkl phone</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.4</td> <td>Iron</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.5</td> <td>Trolley</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.6</td> <td>Bycicle</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.7</td> <td>Vehicle</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.8</td> <td>TV/ Video</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.9</td> <td>Refrigerator</td> <td><input type="checkbox"/></td> </tr> <tr> <td>10.2.10</td> <td>Motorbike/vespa</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	Number	Property	Yes=1, No=2 (1) (2)	10.2.1	Radio (Radio, Radio Casette, music system)	<input type="checkbox"/>	10.2.2	Land line	<input type="checkbox"/>	10.2.3	Celkl phone	<input type="checkbox"/>	10.2.4	Iron	<input type="checkbox"/>	10.2.5	Trolley	<input type="checkbox"/>	10.2.6	Bycicle	<input type="checkbox"/>	10.2.7	Vehicle	<input type="checkbox"/>	10.2.8	TV/ Video	<input type="checkbox"/>	10.2.9	Refrigerator	<input type="checkbox"/>	10.2.10	Motorbike/vespa	<input type="checkbox"/>
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<p>10.1.4 Number of bedrooms <input type="text"/><input type="text"/></p>																																			
<p>10.3 Energy use and availability in the hsourcehold</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Main source of energy</th> </tr> </thead> <tbody> <tr> <td>10.3.1 Lighting <input type="checkbox"/></td> <td>10.3.2 Cooking <input type="checkbox"/></td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%; background-color: #e0f2f1; padding: 2px;"> <p><u>Nishati za Kuangazia</u> Umeme.....01 Sola.....02 Gesi (biogas).....03 Taa ya kandili.....04 Karabai.....05 Kibatai.....06 Mishumaa.....07 kuni.....08 Nyingine.....98</p> </div> <div style="width: 45%; background-color: #e0f2f1; padding: 2px;"> <p><u>Nishati za kupikia</u> Umeme.....01 Sola.....02 Gesi (biogas).....03 Gesi (Kwandani)....04 Mafuta ya taa.....05 Mkaa.....06 Kuni.....07 Mabaki ya Mazao....08 Kinyesi cha Wanyama.....09 Nyingine.....98</p> </div> </div>	Main source of energy		10.3.1 Lighting <input type="checkbox"/>	10.3.2 Cooking <input type="checkbox"/>	<p>10.4 Availability of drinking water</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th>Season</th> <th>Main source of water</th> <th>Distance from source (km)</th> <th>Time spent waiting or going to and from the source (Hours)</th> </tr> <tr> <th>(1)</th> <th>(2)</th> <th>(3)</th> <th>(4)</th> </tr> </thead> <tbody> <tr> <td>10.4.1</td> <td>Rainy</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/>-<input type="checkbox"/></td> </tr> <tr> <td>10.4.2</td> <td>Dry period</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/>-<input type="checkbox"/></td> </tr> </tbody> </table> <div style="margin-top: 5px; background-color: #e0f2f1; padding: 5px;"> <p><u>Main source of drinking water Col. 2</u> Tape water.....01 Water venders.....09 Artificial well.....02 Boozer.....10 Artificial spring.....03 Bottled water.....11 Openwell.....04 Other (Specify).....98 Natural spring.....05 Lake water, piong, river, stream n etc.....06 Covered Rain water harvesting well...07</p> </div>		Season	Main source of water	Distance from source (km)	Time spent waiting or going to and from the source (Hours)	(1)	(2)	(3)	(4)	10.4.1	Rainy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - <input type="checkbox"/>	10.4.2	Dry period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - <input type="checkbox"/>											
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<p>Note: Code 01, Bomba kwa Zanzibar hujulikana kama Mfereji</p>																																			
<p>10.5 Toilet facilities</p> <p>10.5.1 What type of toilet does your hosuehold use? <input type="checkbox"/></p> <div style="margin-top: 5px; background-color: #e0f2f1; padding: 2px;"> <p><u>Type of toilet</u> No toilet/in the bush.....1 Pit latrine....4 Flash toilet.....2 Other type (Specify).....8 Ordinal pit latrine.....3</p> </div>	<p>10.6 Eating patterns</p> <p>10.6.1 How many meals does your hosue usually get per day ? <input type="checkbox"/></p> <p>10.6.2 How days did the household eat meat last week? <input type="checkbox"/></p> <p>10.6.3 How days did the household eat fish last week? <input type="checkbox"/></p> <p>10.6.4 How many times did the household experience food shortages last year? <input type="checkbox"/></p> <div style="margin-top: 5px; background-color: #e0f2f1; padding: 5px;"> <p><u>Food shortage problems (Swali 10.6.4)</u> Never.....1 Few times.....2 Sometimes.....3 Many times.....4 Often.....5</p> </div>																																		
<p>10.7 Main source of household cash income?</p> <p>10.7.1 What are the sources of household income? <input type="checkbox"/><input type="checkbox"/></p> <div style="margin-top: 5px; background-color: #e0f2f1; padding: 2px;"> <p><u>Code for source of income</u> Selling food crops.....01 Sales of foerst products..05 Cash assinatce...09 Sales of livestock.....02 Business.....06 Fishingi.....10 Sales of livestock products.....03 Salaries.....07 Other.....98 Sales of cash crops...04 Casual labour.....08 None.....99</p> </div>																																			
<p>TIME OF FINISHING THE INTERVIEW</p> <table border="1" style="display: inline-table; margin-left: auto;"> <tr> <td style="width: 20px;">Hour</td> <td style="width: 20px;"><input type="text"/><input type="text"/></td> <td style="width: 20px;">Minutes</td> <td style="width: 20px;"><input type="text"/><input type="text"/></td> </tr> </table>		Hour	<input type="text"/> <input type="text"/>	Minutes	<input type="text"/> <input type="text"/>																														
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Appendix V

Community Level Questionnaire

United Republic of Tanzania

ACQ 3

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Village/Community Level Formats

Access to and Use of Community Resources

Farm Gate Prices of commodities produced by the village



Agricultural Sample Census
2007/2008

NUMBER OF FARMERS HH IN THE VIALAGE
To be filled by the enumerator after compleiteing form ACLF2

NUMBER OF HH MEMBERS
To be filled by the enumerator after compleiteing form ACLF2

Region		Ward	
District		Village	

Enumerator Name _____ Signature _____

Date of Enumeration

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d	d	m	m	y	y	y	y

Start Time

<input type="text"/>	<input type="text"/>
Hour	Minutes

End Time

<input type="text"/>	<input type="text"/>
Hour	Minutes

Field level checking by:

District Supervisor	Name _____	Signature _____	Date ____/____/____
Regional Supervisor	Name _____	Signature _____	Date ____/____/____
National Supervisor	Name _____	Signature _____	Date ____/____/____

I To be filled by the supervisor ONLY after Field/farm level checking of the enumeration process. This should be countersigned by the Supervisor in front of the enumerator

District checking in Office

District Supervisor	Name _____	Signature _____	Date ____/____/____
---------------------	------------	-----------------	---------------------

All questionnaires must be checked at the district office.

For Use at Regional Level Only

Data entered by:	Name _____	Signature _____	Date ____/____/____
Queried	Name _____	Signature _____	Date ____/____/____

See the back page for details of queries

Ministry of Agriculture and Food Security, Ministry of Livestock and Fisheries Development, Ministry of Agriculture and Environment of Zanzibar, Ministry of Water and Irrigation, Prime Ministers' Office Regional Administration and Local Government, Ministry of Industry Trade and Marketing, National Bureau of Statistics, and the Office of the Government Statistician General of Revolution Governemnet of Zanzibar

Definitions and working page for page 3

Question Specific Definitions:

Obtain answers to the following questions from the meeting between the enumerator and influential farmers in the village
 Influential people can be Village Chairman, Village Government Executive Officer, Councillor, Ward Chairman, Extension Officer in the village or any other person in the village and who is well informed about village matters. It is important to not that these questions must be asked in groups (of more than one people) to obtain answers discussed and approved by many people.

Definitions of some specific terms

Access to community resources. Section 1.0

Community Resources: Resources in which the hh members have no individual claim to and which are shared together by all the village
Community Land: The area official demarcated by the village as shared/public land.
Squatting farmers Land: Communal land where individual hhs make sole claim to (for crop farming or fenced livestock) without official rights to ownership.
Available remaining Land: Official area of communal land minus areas of squatting farmers.
Government Land Reserve: Area set aside by the government as national reserve

Community tree planting scheme(Section 14.3)

Community Forest: A forest planted on the communal land which is planted, replanted or spt planted by the members of the village.
Plant Planting: An area designated by the village for planting a block of trees.
Spot Planted: Replanting an area where selective logging has been carried out. A tree is planted to replace the one that has been cut.
Indigenous Trees: Trees that are native to Tanzania
Exotic Trees: Trees that are not native to Tanzania

Non Government Organisation: Is managed by people from outside the village and it normally covers more than one village/District/Region. Its function is to provide deveoopment assistance to the farmer and is free from direct government links.

Village level organization: is managed by members of the village. Its purpose is normally to access/provide development assistance to the village

Obtain answers to the following questions from the meeting of enumerator and key informants in the village. Key informants can be a village chairman, Village Local Government Executive Officer, Councillor, Ward Chairman, Village extension officer, or any knowledgeable member in the community. Where possible ask these questions to a group in order to reach a consensus. **The number should be below five people.**

- Procedure:** Administer this form after completing all smallholder questionnaires for the village.
1. Copy the name of all crops from Sections 5.1, 5.2 and 5.3 grown in the village from smallholder questionnaires. This should also include livestock raised by the household from questions 9.1, 9.3, 9.4 and 9.5 and enter them in column 1 of this form. Also see codes for livestock below.
 2. Enter price estimates per kg in column 5 and 6.

Name of crop/livestock <i>(1)</i>	Code of crop/livestock <i>(2)</i>	Name of main crop <i>(3)</i>	Code of Main crop <i>(4)</i>	Type of measure <i>(5)</i>	Price of measure	
					Minimum Per year <i>(6)</i>	Maximum Per year <i>(7)</i>

Type of livestock (Col. 2)

Cattle01 Ducks.....07
 Goat.....02 Turkey.....08
 Sheep.....03 Rabbit.....09
 Pigs.....04 Kanga.....10
 Poultry.....05 Simbinsi.....11
 Donkeys.....06

Main product- CROPS (Col. 4)

Cereals.....01 Flowers eg. Pyrethrum.....07
 Green maize.....02 Vegetables.....08
 Green leaves and stem03 Fruit.....09
 Straw, dry stems etc.04 Other.....10
 Roots and tubers, etc.....05
 Leaves (Tobacco etc).....06

Main product- LIVESTOCK (Col. 4)

Live animals.....01
 Meat.....02
 Milk.....03
 Eggs.....04

Quantity (Col. 5)

Kg.....1
 Number.....2
 Litre.....3
 A portion/piece4

Appendix V

Village Community Level formats

UNITED REPUBLIC OF TANZANIA

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Page Number..... out of.....

Agriculture Sample Census 2007/08

ACL F 1

Sub-village /ward leader listing from

Region _____ Code Ward _____ Code

District _____ Code Village _____ Code

Sub village leader Number	Name of Ward village leader	Number of Households		Comments
		Form Office Register	After enumeration	
(1)	(2)	(3)	(4)	(5)
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	

UNITED REPUBLIC OF TANZANIA

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Page Number..... out of.....

Agriculture Sample Census 2007/08

ACL F 2

Household listing from-for listing hh heads and agriculture activities

Region _____ Code Name of sub village leader _____

District _____ Code Name of sub village _____

Ward _____ Code

Village _____ Code

Household number	Household head name	Fields a	Number of								If the Respondent Qualifies X	Farmer Serial Number		
			Total	Cattle			Goats	Sheep	Pigs	Kuku/Bata/			Rabbit	
				Bulls	Cows	Calves								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ACLF 3

**UNITED REPUBLIC OF
TANZANIA**

**National Agriculture Sample
Census 2007/08**

CONFIDENTIAL

Household listing for 15 selected farmers

Region _____ Code ward : _____ code Namba Sawia

District _____ Code village : _____ code Hatua

S/N	Sub-village leader Number	Name of sub-village leader	Name of selected head of household	Name of Household Head	Number of					
					Field	Cattle	Goat	Sheep	Pigs	Poultry
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)